BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS

GARY PIERCE - Chairman
BOB STUMP
SANDRA D. KENNEDY
PAUL NEWMAN
BRENDA BURNS

IN THE MATTER OF THE FORMAL COMPLAINT OF VIKTOR PETER POLIVKA,

COMPLAINANT,

vs.

TUCSON ELECTRIC POWER COMPANY,

RESPONDENT.

DOCKET NO. E-01933A-10-0340

DECISION NO. 73088

OPINION AND ORDER

DATES OF HEARING:	March 3 and April 19, 2011
PLACE OF HEARING:	Tucson, Arizona
ADMINISTRATIVE LAW JUDGE:	Belinda A. Martin
APPEARANCES:	Mr. Viktor Peter Polivka, *In Propia Persona*; Mr. Jason D. Gellman, ROSHKA DeWULF & PATTEN, PLC, on behalf of Tucson Electric Power Company; and Ms. Melody Gilkey, Corporate Counsel, Tucson Electric Power Company.

BY THE COMMISSION:

On August 11, 2010, Viktor Peter Polivka filed with the Arizona Corporation Commission ("Commission") a formal complaint against Tucson Electric Power Company ("TEP" or "Company") pursuant to A.R.S. § 40-246(A) ("Complaint"). In his Complaint, Mr. Polivka alleges that TEP failed to provide him with an appropriate up-front incentive for the self-installed solar electric system on his home in violation of TEP's Commission-approved 2010 Renewable Energy Credit Purchase Program.

* * * * * * * * * *

Having considered the entire record herein and being fully advised in the premises, the Commission finds, concludes, and orders that:

FINDINGS OF FACT

INTRODUCTION

The Parties

Viktor Peter Polivka

1. Mr. Polivka is a Tucson resident and a TEP customer. Mr. Polivka began construction of a solar electric system on his mobile home in late 2009 and completed its installation around March 1, 2010. Mr. Polivka, who is a mechanical engineer, installed the system himself.

TEP and its Renewable Energy Credit Purchase Program

2. TEP is a public service corporation engaged in the business of providing electric service within portions of Arizona pursuant to authority granted by the Commission.

3. On August 14, 2007, the Commission implemented the Renewable Energy Standard and Tariff ("REST") rules, Arizona Administrative Code ("A.A.C.") R14-2-1801, *et seq.* ("REST Rules"), which require that an electric utility derive a certain percentage of its annual retail electricity sales from renewable energy resources. A.A.C. R14-2-1813(A) requires that an electric utility subject to the REST Rules file with the Commission each year a "plan that describes how it intends to comply with the [REST Rules] for the next calendar year." TEP filed its first REST Implementation Plan, which included TEP's proposed Renewable Energy Credit Purchase Program ("RECPP"), as required by the REST Rules in late 2007. The Commission subsequently approved TEP's 2009 RECPP in Decision No. 70652 (December 18, 2008).

4. Among other things, an RECPP sets forth the processes and requirements for individuals or entities wanting to obtain an up-front incentive ("UFI") from TEP for solar electric projects. A UFI is a "one-time incentive payment based on system capacity or estimated energy [kilowatt hour] production rather than on measured system output."[1] The funds for UFIs come from a monthly REST assessment paid by TEP's customers. A customer wishing to obtain a UFI for a solar electric system may qualify for either an On-Grid (or Grid-Tie) UFI or an Off-Grid UFI.

5. In Decision No. 71465 (January 26, 2010), the Commission approved TEP's 2010

[1] Hearing Exhibit TEP-6, page 13-2.

REST Implementation Plan, which included TEP's 2010 RECPP. This RECPP is the basis for Mr. Polivka's Complaint (the relevant section of the RECPP is attached as Exhibit A).

6. The following are the 2010 RECPP provisions central to this matter:

- UFIs for on-grid residential customers are calculated at $3.00 per direct current watt ("Wdc") generated by the customer's solar panels.
- UFIs for off-grid residential customers are calculated at $2.00 per Wdc generated by the customer's solar panels.
- On-grid customers receive UFIs based on a system size cap of 20 kilowatts alternating current ("kWac").
- Off-grid customers currently paying into the REST tariff receive UFIs based on system size cap of 4kWac.
- Off-grid customers not currently paying into the REST tariff receive UFIs based on system size cap of 2kWac.
- The UFI amount is calculated at the time the application is approved for reservation, subject to buydown calculations ("Buydown") if the customer's solar array is placed at less than optimal azimuth and elevation angles.
- The system and installation must meet the requirements of all federal, state and local building codes and must be successfully inspected by the building official having jurisdiction.
- Residential customers may self-install their system providing they adhere to all applicable codes and standards.
- The UFI for self-installed systems is limited to seventy percent of the standard UFI.
- Storage batteries are not allowed as part of the customer system unless the inverter is a separate component and TEP can locate the solar meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output.
- Customer systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale ("Jurisdictional Permit").
- In return for TEP's UFI payment, TEP will be given complete and irrevocable ownership of the renewable energy credits generated by the system until December 31st of the 20th full calendar year after completion of installation of the system.

7. TEP presented four witnesses at hearing. TEP's first witness, Blanka Anderson, is the Residential Coordinator for TEP's Renewable Energy Program, also called SunShare. Ms. Anderson has been with TEP since the program's inception in 1999. Her duties include reviewing and

processing residential renewable energy incentive applications and calculating and distributing incentives. Ms. Anderson has reviewed thousands of applications for renewable energy incentives, including Mr. Polivka's.[2]

8. Another TEP witness was Chris Lindsey, an Energy Services Engineer for TEP. Mr. Lindsey reviews interconnection applications for systems sized 20 kilowatts and above, regardless of whether they are related to renewable or traditional generation. Mr. Lindsey also provides technical support to the SunShare program. Mr. Lindsey worked with Ms. Anderson on Mr. Polivka's applications and he also corresponded and met with Mr. Polivka about his system.[3]

9. Other TEP witnesses were Marc Romito, Senior Program Manager for the Renewable Energy Programs, supervisor of TEP's distributed generation programs,[4] and Edward Mansfield, TEP's Meter Supervisor.[5]

Summary of Complaint and Answer

10. Mr. Polivka began construction of his solar electric system, which includes storage batteries, in late 2009.[6] In February 2010, Mr. Polivka submitted an application for an On-Grid UFI and an application for an Off-Grid UFI to TEP.[7] In April 2010, TEP advised Mr. Polivka that the improper placement of the storage batteries on his system disqualified him from receiving an On-Grid incentive, but TEP offered Mr. Polivka a $4,000 Off-Grid UFI.[8]

11. Mr. Polivka alleges that TEP violated the terms of its 2010 RECPP when the Company denied him an On-Grid UFI because, 1) TEP objected to the configuration of his system; 2) he installed the system himself; and 3) he did not use TEP's preferred system components. Mr. Polivka asserts that TEP's reasons for rejecting his On-Grid application are self-serving and improper and Mr. Polivka believes he is entitled to an On-Grid UFI regardless of TEP's system configuration and component preferences. Further, Mr. Polivka alleges that the City of Tucson requires a letter from TEP acknowledging the grid tie-in before it will issue a Jurisdictional Permit, but TEP refuses

[2] Transcript of Hearing, Volume I, page 63-64. (Hereinafter, "Tr. at __.")
[3] Tr. at 124-125.
[4] Tr. at 237.
[5] Tr. at 245.
[6] Tr. at 271.
[7] Hearing Exhibit TEP-2.
[8] Hearing Exhibit TEP-4.

to provide him with this letter.

12. Mr. Polivka also claims that TEP ordered him to completely disconnect from TEP's system, advising him it was the only way he could qualify for an Off-Grid incentive. Mr. Polivka claims that TEP purposely waited until he disconnected and was no longer paying into REST tariff so the Company could offer him the lowest UFI possible, rather than the amount he believes he is entitled to.

13. Mr. Polivka requests the Commission find that TEP has violated the terms of the 2010 RECPP and direct TEP to provide him with the letter of acknowledgement, to accept his battery back-up as it is currently configured, and provide him with an On-Grid UFI. Alternatively, Mr. Polivka requests that the Commission direct TEP to provide him with the Off-Grid UFI for a customer currently paying into the REST tariff.

14. TEP denies Mr. Polivka's allegations, explaining that under the 2010 RECPP a customer may install a solar electric system themselves and receive a UFI as long as the customer complies with the program's requirements. TEP argues that Mr. Polivka failed to investigate the RECPP requirements before he purchased and installed his system and, as a result, Mr. Polivka installed the battery back-up on his system in a configuration not permitted under the RECPP. It was for this reason TEP determined that Mr. Polivka did not qualify for an On-Grid incentive, not because of the type of battery back-up he installed. TEP also notes that Mr. Polivka has not obtained the necessary Jurisdictional Permit from the City. TEP claims that the City does not require a letter of acknowledgement for participants in TEP's SunShare program and TEP is not preventing Mr. Polivka from obtaining the required permit. Finally, TEP denies that the Company ever demanded that Mr. Polivka disconnect from TEP's system and argues that its Off-Grid UFI calculations supporting its offer to Mr. Polivka are correct under the RECPP.

15. TEP requests that the Commission find the Company has not violated the terms of the 2010 RECPP and deny any compensation for Mr. Polivka outside that permitted under the RECPP.

Procedural History

16. On August 11, 2010, Mr. Polivka filed his Complaint against TEP with the Commission.

17. On August 31, 2010, TEP filed a Motion for Extension of Time to Respond to the Complaint.

18. On September 2, 2010, Mr. Polivka filed his Motion to Deny Extension of Time to Respond, objecting to TEP's Motion for Extension.

19. On September 3, 2010, TEP filed its Answer to Formal Complaint and Motion to Dismiss ("Answer").

20. On September 8, 2010, Mr. Polivka filed a Motion to Compel to Produce Inspection Document that Addresses Specific Technical Reason TEP Used to Deny Approval of Complainant's Residential Renewable Energy Solar System ("Motion to Compel"). In his Motion to Compel, Mr. Polivka requested an order directing TEP to provide a copy of an alleged inspection document stating the "official" reason why his applications were denied.

21. On September 10, 2010, Mr. Polivka filed a Motion to Dismiss Tucson Electric Power Company Motion to Dismiss.

22. On September 13, 2010, Mr. Polivka sent to TEP a Motion to Demand to Produce Documents and Files ("Motion to Produce").[9] In his Motion to Produce, Mr. Polivka demanded production of documents relating to another TEP customer's system with a battery back-up referenced in correspondence from TEP.

23. On September 17, 2010, TEP filed its Response to Complainant's Motion to Compel and Motion to Demand to Produce. TEP's Response briefly stated, "TEP is not aware of the 'inspection document' that Complainant references. No such report exists, nor is it the Company's practice to generate reports regarding individual renewable systems."

24. Pursuant to a Procedural Order filed October 18, 2010, a procedural conference was held on November 10, 2010. During the procedural conference, TEP's Motion to Dismiss was denied.[10] The parties indicated that they had not settled the matter and wished to set a hearing. TEP was directed to file pleadings more responsive to Mr. Polivka's Motions.[11]

25. A Procedural Order was filed on November 30, 2010, setting the hearing for March 3,

[9] The Motion to Produce was not filed with the Commission until September 20, 2010.
[10] Transcript of November 10, 2010, Procedural Conference, page 4.
[11] *Id.*, page 5.

2011, and setting other procedural deadlines.

26. On December 22, 2010, Mr. Polivka filed a Motion for Summary Default Judgment for Off Grid Residential Solar System.

27. On December 29, 2010, TEP filed its Response to Complainant's Motion to Demand to Produce, by which Mr. Polivka had requested that TEP produce documents relating to a system similar to Mr. Polivka's. TEP responded that it had no documents or files of this sort, stating, "The reference to approval of a similar system in the past was a general reference and was not meant to refer to a specific customer's account."[12]

28. On January 3, 2011, TEP filed a copy of a letter addressed to Mr. Polivka dated December 29, 2010, in response to Mr. Polivka's Motion to Compel. In this letter, TEP explained in detail the reasons for finding that his system in its current configuration did not qualify for an On-Grid UFI, but TEP stated that Mr. Polivka's system may still qualify for an Off-Grid UFI.

29. On January 27, 2011, Mr. Polivka filed a letter with Docket Control attaching copies of two emails he sent directly to Mr. Lindsey, instead of through TEP's counsel. In one of the emails, sent January 6, 2011, Mr. Polivka explained his disagreements with TEP's conclusions stated in its December 29, 2010, letter.[13]

30. On February 3, 2011, Mr. Polivka filed his Witness List. One of the witnesses listed was identified as "John Doe, Approved Off-Grid TEP customer with similar system in the past."

31. On February 14, 2011, TEP filed a Motion in Limine, requesting that Mr. Polivka be precluded from calling the John Doe customer at hearing. TEP stated that the Company had explained several times that the only similarity between that customer's system and Mr. Polivka's was the use of a battery bank, which resulted in an Off-Grid UFI for that customer—the same type of incentive TEP offered to Mr. Polivka. TEP included the Affidavit of Chris Lindsey in support of these assertions. Nevertheless, TEP claimed it conducted "an extensive independent search,

[12] The statements regarding a "similar system" were in an April 7, 2010, 1:31 p.m., email from Mr. Lindsey to Mr. Polivka. The email reads in part, "After further discussion, the only option we have is to approve this as an off-grid system. There is no way to meter your system for the data *and this is what we have done for a similar system in the past.*" (Emphasis added.)

[13] The other email, dated January 25, 2011, related to Mr. Polivka's interactions with a TEP meter technician who came to Mr. Polivka's home on a matter unrelated to the Complaint.

including contacting a retired employee, regarding the reference to a 'similar system.'"[14] TEP attached as an Exhibit to its Motion a copy of the John Doe customer's UFI application, with the customer's personal information redacted. TEP argued that Mr. Polivka had not demonstrated how this customer's testimony would be material, relevant or probative to the issue of whether TEP has violated any Commission rules or orders respecting its RECPP. Further, TEP argued that the John Doe customer's privacy interests outweighed Mr. Polivka's need for this customer's personal contact information or testimony.[15]

32. On February 17, 2011, TEP filed its Notice of Witnesses and Exhibits.

33. Also on February 17, 2011, Mr. Polivka filed his Response to TEP Motion in Limine, stating due process required that the John Doe customer provide testimony at hearing. Mr. Polivka filed a letter supplementing his Response on February 22, 2011.

34. On March 3, 2011, the hearing convened as scheduled at the Commission's Tucson offices. Mr. Polivka represented himself and TEP was represented by counsel. At the beginning of the hearing, TEP's Motion in Limine was granted, with a finding that: 1) Mr. Polivka failed to demonstrate how the John Doe customer's testimony was relevant to the specific matter before the Commission; and 2) the John Doe customer's privacy interests outweighed the probative value of any testimony or evidence this person might provide.[16] The parties presented evidence and testimony, but the hearing did not finish by the end of the day.

35. On March 9, 2011, a Procedural Order was filed setting the continuation of the hearing for April 5, 2011.

36. On March 11, 2011, TEP filed a Motion to Continue asking that the second day of hearing be rescheduled due to the unavailability of one of TEP's witnesses.

37. On March 15, 2011, Mr. Polivka filed his Response to Motion Continuance from Tucson Electric Power Company, requesting that TEP's Motion to Continue be denied, and on March 17, 2011, Mr. Polivka filed an Addendum to Response to Motion to Continue from Tucson Electric Power Company.

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[14] Motion in Limine, page 2.
[15] *Id.*, page 3.
[16] Tr. at 8-9.

38. On March 22, 2011, a Procedural Order was filed granting TEP's Motion to Continue and re-setting the second day of hearing for April 19, 2011.

39. The hearing reconvened as scheduled. At the conclusion of the hearing, both parties stated that they believed they had received a fair and adequate opportunity to present their case.[17] The matter was taken under advisement and the record closed.

BACKGROUND

Mr. Polivka's Installation of his Solar Electric System

40. Mr. Polivka testified that he began the process of installing the solar energy system on his mobile home by contacting the City of Tucson about obtaining the necessary construction permits.[18] Mr. Polivka stated that in November 2009 he spoke with an individual at the City of Tucson Development Services Department ("DSD"), which is the entity responsible for permitting and inspecting residential solar electric systems. According to Mr. Polivka, this person told him that because he planned to place the system on a mobile home, Mr. Polivka would need to get a structural engineer to certify that the mobile home's roof is suitable for installation of solar panels.[19] Mr. Polivka claimed he could not find a structural engineer willing to inspect the roof.[20]

41. Mr. Polivka stated that he contacted DSD again and the representative told him that he could send DSD whatever information he had about the roofing structure on the mobile home and DSD would review the documentation for a $125 fee. Mr. Polivka testified that he never sent anything to DSD for its review.[21]

42. Mr. Polivka claimed that DSD also told him that TEP must provide a letter acknowledging a grid-tie photovoltaic system before the City will issue a permit.[22]

43. Mr. Polivka moved forward with installation of his system even though he had not yet obtained a permit from the City.[23]

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[17] Tr. at 286.
[18] Tr. at 271-273.
[19] Hearing Exhibit TEP-1; Tr. at 271.
[20] Tr. at 271-273; Hearing Exhibit TEP-1.
[21] Tr. at 273.
[22] Complaint, page 3; Exhibit to Complaint, City of Tucson Development Services Department Residential Photovoltaic Template Electrical Equipment Requirements; Tr. at 273; Answer, Exhibit 3, Copy of Informal Complaint, page 3.
[23] *Id.*

Interactions Between Mr. Polivka and TEP, January 2010 through May 2010

44. Mr. Polivka testified that in early 2010, he called TEP regarding the incentive for his system and spoke with TEP representative Blanka Anderson. Mr. Polivka states that when he explained to Ms. Anderson that he was installing the system himself on his mobile home, she laughed, "[a]nd she thought it was the funniest thing she had ever heard in her life."[24] Mr. Polivka stated that he gave "her a lecture for another 20 minutes that I'm making a serious business call and I don't appreciate at 67 being laughed at, especially by a clerk…I don't like to be mistreated by people."[25]

45. Ms. Anderson testified that she believes she received a telephone call from Mr. Polivka regarding his solar electric system in January 2010. She stated that Mr. Polivka spoke "very forcefully," demanding to know where his incentive was even though he had not contacted her about his system before.[26] Mr. Polivka related that he had installed the system himself and that it was a battery back-up system. Ms. Anderson stated that she was surprised to hear that Mr. Polivka had already installed his system since every application she receives is for a planned project, not a completed project. In addition, Ms. Anderson testified that TEP rarely receives applications from individuals who are planning on installing the systems themselves. Ms. Anderson also testified that in her review of all the incentive applications received by TEP since 2000, this was the first time she had encountered a customer who had placed solar panels on a mobile home. Ms. Anderson denied that she laughed when Mr. Polivka told her he had placed a solar energy system on his mobile home, adding that perhaps she sighed a little because of all the unusual circumstances surrounding Mr. Polivka's system, but stated, "[T]here is nothing to laugh about. That is my job, and I'm happy to help him."[27] Ms. Anderson testified that although this was an unusual situation, she believed there was nothing about it that would prevent Mr. Polivka's system from qualifying for an incentive.[28]

46. Ms. Anderson stated that she advised Mr. Polivka he would need to fill out an application for an incentive and in the meantime she would speak with TEP's engineers who work in

[24] Tr. at 52.
[25] *Id.*
[26] Tr. at 68.
[27] Tr. at 71.
[28] Tr. at 68-71.

the program about Mr. Polivka's project.[29] Ms. Anderson testified she felt she needed some engineering advice "because we are walking backward. We have put this on a mobile home, and I was a little concerned structurally. I am not an engineer...I wasn't sure, should I be worried or concerned or not."[30] Ms. Anderson stated that she spoke with Mr. Lindsey, his boss Steve Metzger, and also with now-retired TEP engineer Bill Henry about Mr. Polivka's system.[31]

47. Ms. Anderson testified that she emailed the UFI applications to Mr. Polivka, but she believed he had difficulty getting the attachments to open. Ultimately, she printed the applications for On-Grid and Off-Grid incentives and mailed them to Mr. Polivka.[32] Included with each application was a corresponding Renewable Energy Credit Purchase Agreement, an "Attachment A," listing the respective system requirements for the On-Grid or Off-Grid systems, and an "Attachment B," which is the SunShare PV Off-Angle & Shading Annual Energy Derating Chart ("Derating Chart"). All of these documents mirror the qualifications, requirements and incentive formulas stated in the RECPP.[33]

48. Ms. Anderson testified that in late February 2010, she received a letter from Mr. Polivka dated February 17, 2010.[34] Included with the letter were the On-Grid and Off-Grid UFI applications and Renewable Energy Credit Purchase Agreements filled out and signed by Mr. Polivka. Mr. Polivka also included various documents detailing the specifications of his system, as well as the system's warranty information. In the cover letter, Mr. Polivka detailed the difficulties he was having with the City getting a permit for his system. Mr. Polivka also stated in this letter:

> I'm sending you 2 applications: one for the On Grid Residential Solar Electric and the other for the Off Grid Residential Solar Electric—I do not see what the difference is the apps are the same—but, if that is the only alternative to qualify for the incentive, why not. I can go Off Grid, but then TEP would not be able to receive my excess electricity I'll harvest—I guess, I'll have to purchase a truck full of light bulbs to consume the unneeded current?
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> With hopes that I'm on the right track and will come to some sort of agreement, otherwise, I'll just have a very expensive system that will never pay for itself, I'll

[29] Tr. at 71.
[30] *Id.*
[31] *Id.*
[32] Tr. at 71-72.
[33] Tr. at 75-77; Hearing Exhibit TEP-2; Hearing Exhibit TEP-6. "Attachment A" and "Attachment B" to the UFI applications are copied directly from the RECPP.
[34] Tr. at 73; Hearing Exhibit TEP-1.

have to live 495 years more just to break even....[35]

49. Ms. Anderson testified that she turned over Mr. Polivka's applications and system documents to Mr. Lindsey.[36] (Mr. Polivka's On-Grid application is attached as Exhibit B and his Off-Grid application is attached as Exhibit C.)

50. Mr. Lindsey testified that from his review of Mr. Polivka's system documents, the biggest concern he had was the battery back-up's location on the system. Mr. Lindsey stated that TEP does not prohibit battery back-up systems, but there are specific requirements as to how the system and battery bank must be configured if the customer wishes to obtain an On-Grid UFI.[37]

51. Hearing Exhibit TEP-8 is a basic diagram Mr. Lindsey prepared depicting how a solar electric system using storage batteries must be configured in order to qualify for an On-Grid UFI. (The diagram is attached as Exhibit D.) Mr. Lindsey testified that the diagram, viewed left-to-right, illustrates that the energy harvested by the photovoltaic ("PV") array flows into the DC/AC Inverter and is measured at this point by TEP's Distributed Generation ("DG") Meter. Next along the line are the AC Utility Disconnect Switch and the Sub-Panel for Critical Loads. Only now does the energy generated by the PV array flow through the AC/DC Charge Controller and into the battery bank for storage. When power is required from the batteries for use in the home, electricity flows back through AC/DC Charge Controller and into the Electrical Service Entrance.[38]

52. According to Mr. Lindsey, placement of the DG meter immediately after the DC/AC Inverter without an intervening battery bank is important because this configuration lets TEP correctly meter the true amount of energy generated by the PV array, allowing TEP to calculate its renewable energy credits ("RECs"). Mr. Lindsey testified that accurate calculation of the RECs is critical because TEP has paid the customer up-front for ownership of them. Mr. Lindsey explained that during the application process, TEP calculates how many RECs it should expect to receive for a particular residential system each year for a contractually stipulated 20 years.[39]

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[35] Hearing Exhibit TEP-1. (Mr. Polivka's emails, letters and filings contain a number of spelling errors. When quoting Mr. Polivka, the spelling has been corrected for ease of reading. Grammar and punctuation are unchanged.)
[36] Tr. at 80.
[37] Tr. at 125-126.
[38] Hearing Exhibit TEP-8; Tr. at 127-128.
[39] Tr. at 128-131.

53. If a customer's storage batteries are located before the DG Meter (or, on the "DC side" of the system), any energy required to charge the batteries will be pulled directly from electricity generated by the PV array and it will not be measured by the DG Meter. This will reduce the amount of RECs TEP can claim and TEP will not receive the full benefit of the agreement between the customer and the Company.[40] As the batteries age, they will require even more energy to charge, further decreasing the RECs available to TEP.[41]

54. Mr. Lindsey noted that if a customer wishes to obtain an Off-Grid UFI, the location of the battery back-up on the system is unimportant for TEP's purposes.[42]

55. On March 19, 2010, Mr. Polivka sent an email to Ms. Anderson asking about the status of his applications, stating, "Since I've not heard from anyone lately I assume that the 'deal is off', no interest by TEP, since they cannot 'profit' from my system."[43]

56. Ms. Anderson immediately forwarded this email to Mr. Lindsey,[44] who replied to Mr. Polivka on March 22, 2010, stating, "Mr. Polivka: Don't give up just yet. We are still evaluating your system and the drawings you sent over to us for the metering arrangement. Please bear with me because we should be able to find a place for your system."[45]

57. Mr. Polivka responded to Mr. Lindsey's email later that day, stating that he had reviewed TEP's requirements for a UFI and (mistakenly) believed that the only program he qualified for was the Performance Based Initiative ("PBI").[46] Mr. Polivka explained he was not interested in a PBI, stating that before he would accept it, he would "go off the grid entirely."[47] Mr. Polivka also explained he installed the battery back-up because he has medication that must be kept refrigerated and he needs a continuous source of electricity to run his refrigerator.[48] Mr. Polivka concluded, "Thanks again for your cooperation, and I'll see what develops, in the meantime I'll run 'off the grid'

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[40] *Id.*
[41] Tr. at 131.
[42] Tr. at 235. The 2010 RECCP states, "Off-Grid systems will not be metered. Compliance reporting production will be based on an annual 20% capacity factor using nameplate DC rating for capacity." (Hearing Exhibit TEP-6, page 1-11.)
[43] Exhibit to Complaint, email from Viktor Polivka to Blanka Anderson, dated March 19, 2010, 11:44 a.m.
[44] Exhibit to Complaint, email from Blanka Anderson to Chris Lindsey, dated March 19, 2010, 11:44 a.m.
[45] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated March 22, 2010, 7:41 a.m.
[46] Ms. Anderson testified that Mr. Polivka does not qualify for the PBI because the PBI is for commercial, not residential, customers. Tr. at 72-73.
[47] Exhibit to Complaint, email from Viktor Polivka to Chris Lindsey, dated March 22, 2010, 12:48 p.m.
[48] *Id.*

(may have to add a few batteries to my system, since sunlight is only available in Tucson for around 85% on the days) 305 sunny day annually, so I'll not need the 'grid support' then. Polivka."[49]

58. After completing the review of the system information provided by Mr. Polivka, Mr. Lindsey sent an email to him on March 30, 2010, stating, "I think it would be best if I can come take a look at your system before we move forward."[50] Through a series of emails, the two men agreed that Mr. Lindsey would visit Mr. Polivka's house on Friday, April 2, 2010.[51] According to Mr. Lindsey, the purpose of his visit was to verify that Mr. Polivka's system interconnected with the grid in a safe manner and to confirm the configuration of the storage batteries.[52]

59. During the site visit, Mr. Lindsey successfully completed tests on the interconnection between Mr. Polivka's system and TEP's system to ensure that Mr. Polivka's system was properly configured so that if the grid failed, his system would not attempt to energize TEP's lines.[53] Mr. Lindsey next looked at the system to see how it was configured. Mr. Polivka explained to Mr. Lindsey how the system, including the battery bank, was installed and Mr. Lindsey verified that the drawings Mr. Polivka provided to TEP were accurate representations of the system's wiring.[54]

60. Mr. Lindsey testified it was at this time he explained to Mr. Polivka that the battery back-up was not configured in the manner required by TEP because they were located on the system's DC side.[55] Mr. Lindsey stated he and Mr. Polivka spoke about the necessity of moving the battery bank to the AC side (after the DG Meter), which would require a different charge controller from the one Mr. Polivka was using. According to Mr. Lindsey, he and Mr. Polivka discussed possible ways to get around the need to reconfigure the battery bank.[56]

61. Mr. Lindsey testified that during this visit, he and Mr. Polivka also talked about the ongoing difficulties Mr. Polivka faced trying to obtain the permit from the City and TEP's need for the permit for an On-Grid incentive. Mr. Lindsey stated that he "made it clear to [Mr. Polivka] that

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[49] *Id.*
[50] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated March 30, 2010, 11:50 a.m.
[51] Exhibits to Complaint, emails between Chris Lindsey and Viktor Polivka, dated March 30, 2010, 2:33 p.m., April 1, 2010, 6:16 a.m., 8:12 a.m., and 8:21 a.m.
[52] Tr. at 135-136.
[53] Tr. at 136.
[54] Tr. at 137.
[55] *Id.*
[56] *Id.*

he needed a permit while he was a TEP customer."[57] According to Mr. Lindsey, he had talked with a TEP principal engineer, now retired, who explained, "[A]fter Mr. Polivka disconnected from the grid and cancelled service with TEP…that he may not need a permit in that case."[58] Mr. Lindsey testified that he relayed this information to Mr. Polivka, but he admitted this information was wrong. Mr. Lindsey stated he had since learned that the RECPP's terms require a Jurisdictional Permit for any type of incentive.[59]

62. The day after this meeting, Mr. Polivka sent an email to Mr. Lindsey stating he believed he had come up with a solution to the placement of the battery back-up and TEP's DG Meter. Mr. Polivka went into a technical explanation of his plan, involving the use of a net meter, a revenue meter and various bypasses. Mr. Polivka ended his email, "Hence, I prefer to use the 'grid support mode', but if needed I'll go to 'invert mode', with no grid tie. As I understand, I then will not even need a 'permit' for the system if I'm in a 'stand alone mode.'"[60]

63. Mr. Lindsey responded to Mr. Polivka's email on April 7, 2010, stating TEP's position:

> After further discussion, the only option we have is to approve this as an off-grid system. There is no way to meter your system for the data we need and this is what we have done for a similar system in the past. Unfortunately, the incentive is less than on-grid and you will still need a permit with the city for us to inspect your system and pay incentive. Give me a call when you can so we can discuss this further. Thank you for your patience with myself throughout this process.[61]

64. Mr. Polivka responded to Mr. Lindsey later that day, reiterating that his alternate plan would work; it would just take some extra effort.[62] Mr. Lindsay replied approximately 30 minutes later, explaining that Mr. Polivka's proposed metering plan would not work for TEP's purposes because it would still not allow TEP to accurately measure the total amount of energy harvested by Mr. Polivka's PV array.[63]

65. A short time later, Mr. Lindsey sent a second email to Mr. Polivka, explaining that

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[57] Tr. at 138-140.
[58] Tr. at 140.
[59] *Id.*
[60] Exhibit to Complaint, email from Viktor Polivka to Chris Lindsey, dated April 3, 2010, 9:35 a.m.
[61] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated April 7, 2010, 10:46 a.m.
[62] Exhibit to Complaint, email from Viktor Polivka to Chris Lindsey, dated April 7, 2010, 1:31 p.m.
[63] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated April 7, 2010, 2:05 p.m.

since Mr. Polivka's home was still tied to the grid, he would need a permit from the City before TEP could approve Mr. Polivka's system for an On-Grid UFI; however TEP could accept Mr. Polivka in the Off-Grid program.[64]

66. Mr. Polivka replied to Mr. Lindsey that night, writing:

> Chris: as per your last Email, I decide we reached the "point of no return". Although I've not been using any grid power—I've been on straight invert for the last 25 days, and only connected last Friday, for a few hours when you came in for the "inspection," today I physically removed, the last tie to the "umbilical cord," the 100Amp breaker under the meter…
>
> Hence you may send over a service tech to take the old Wh meter out, and I'll contact TEP to come and take the last meter reading (there are 5wh registered on the meter, used when you came by to inspect/test.)
>
> Thank you for your cooperation, but now I'm FREE AT LAST![65]

67. The next day, Mr. Lindsey responded to this email explaining to Mr. Polivka that even if he completely disconnected from TEP, he would still qualify for an Off-Grid incentive, and Mr. Lindsey believed that TEP "would not require a permit for this application any longer. Please contact customer service to start the disconnect process. Once that is complete, please notify Blanka or myself if you are still interested in participating in the off-grid program."[66]

68. On April 16, 2010, Mr. Polivka sent an email to Ms. Anderson referencing an email that she supposedly sent to him on April 13, 2010.[67] According to Mr. Polivka, Ms. Anderson stated in her email that she would soon send a letter explaining why TEP believed Mr. Polivka's system did not qualify for an On-Grid UFI, but as of April 16, 2010, Ms. Anderson had not sent the letter. Mr. Polivka exclaimed, "I NEED AND AM ENTITLED BY LAW, EVERYTHING IN WRITING, WHY MY APPLICATION WAS DENIED FOR A GRID TIE INCENTIVE!"[68] Mr. Polivka requested that Ms. Anderson return all the materials he provided to TEP regarding his system. Mr. Polivka also stated, "I'll accept your decision to deny my system, and also the fact that I was 'ordered' to disconnect from the grid by TEP, since I was only approved for an OFF GRID

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[64] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated April 7, 2010, 3:27 p.m.
[65] Exhibit to Complaint, email from Viktor Polivka to Chris Lindsey, dated April 7, 2010, 10:25 p.m. (Emphasis original.)
[66] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated April 8, 2010, 7:25 a.m.
[67] Neither party provided a copy of Ms. Anderson's April 13, 2010, email to Mr. Polivka.
[68] Exhibit to Complaint, email from Viktor Polivka to Blanka Anderson, dated April 16, 2010, 11:28 a.m. (Emphasis original.)

SYSTEM!"[69] Mr. Polivka advised Ms. Anderson he had entirely disconnected from TEP on April 15, 2010. He also asserted TEP had denied him an incentive because he had self-installed his system.[70]

69. Ms. Anderson replied to Mr. Polivka that afternoon apologizing for the difficulties and delays he had experienced with the application process, but she explained that TEP is obligated to follow the rules and requirements of its Commission-approved RECPP. Ms. Anderson also pointed out that self-installed systems are eligible for incentives under the 2010 RECPP and it would not be a basis for rejecting Mr. Polivka's application. Ms. Anderson stated TEP would continue to work with him on the appropriate incentive and that she and Mr. Lindsey would work on a letter outlining TEP's incentive offer, to which Mr. Polivka would need to agree in writing. Ms. Anderson told him she would send the letter by certified mail.[71]

70. The following week, Ms. Anderson sent Mr. Polivka two emails, one on April 20, 2010, advising him that Mr. Lindsey had drafted a letter regarding TEP's incentive offer, and a second email on April 21, 2010, letting Mr. Polivka know that her supervisor was reviewing the letter and she would send it shortly.[72]

71. Hearing Exhibit TEP-4 is a copy of an undated letter addressed to Mr. Polivka with no letterhead, but with Ms. Anderson's name typed at the bottom without a signature. Hearing Exhibit TEP-9 is a copy of an email from Ms. Anderson to Mr. Polivka dated April 22, 2010, in which Ms. Anderson states TEP's incentive offer letter is attached to the email, as well as a link to TEP's 2010 RECPP. Both documents appear to have been attached to the email as stated.[73] Ms. Anderson testified that she also sent a copy of the letter to Mr. Polivka via certified mail.[74]

72. In the letter, TEP explains that, although Mr. Polivka's system was not eligible for an On-Grid incentive, TEP could offer Mr. Polivka a $4,000 Off-Grid UFI. The relevant parts of the letter read as follows:

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[69] *Id.* (Emphasis original.)
[70] *Id.*
[71] Exhibit to Complaint, email from Blanka Anderson to Viktor Polivka, dated April 16, 2010, 2:33 p.m.
[72] Exhibits to Complaint, emails from Blanka Anderson to Viktor Polivka, dated April 20, 2010, 2:19 p.m., and April 21, 2010, 2:14 p.m.
[73] Hearing Exhibit TEP-9.
[74] Tr. at 121-122.

> As you are aware, the referenced system was installed prior to utility review and approval. Additionally the system is a battery back-up which does not meet TEP's requirements as outlined on page 1-10 of the [RECPP] (see attachment) which specifically states, "Storage Batteries are not allowed as part of the Customer System unless the inverter is a separate component and TEP can locate the Solar Meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output. Customer's solar energy generation and energy storage system must meet the requirements of 2 and 3 of this Attachment A."
>
> ... A department decision was made to offer the compromise of allowing your system to be considered "off-grid" because requirements 2 and 3 referenced above[75] were met wherein allowing us some leeway to pay an incentive based on considering this to be an off-grid system.
>
> It is understood that your service from TEP is now totally disconnected. Referenced on Page 1-11 under *Additional Requirements for Off-Grid Systems.* "The maximum Solar Electric array size for customers currently paying into the REST tariff shall not exceed 4,000 Wac. For customers not currently paying into the REST tariff, systems shall not exceed 2,000 Wac." Your system exceeds the 2,000 Wac requirement.
>
> Taking into consideration the size of your system—incenting up to 2857 Wdc of a self-installed system, TEP is able to pay an incentive of $4,000.
>
> If you'll respond via email in agreement to this incentive, I would be more than happy to process an incentive for you.[76]

73. The letter did not state that Mr. Polivka must first receive a permit for his system from the City, get TEP's final inspection, or that the UFI is subject to possible Buydown.

74. Mr. Polivka replied to TEP's letter the next day, April 23, 2010, in a lengthy email stating his objections to TEP's offer. Mr. Polivka first pointed out that at the time he submitted his applications in February 2010, he was a TEP customer paying into the REST tariff, insisting that he disconnected only because TEP had ordered him to so he could qualify for an Off-Grid incentive. As such, Mr. Polivka believed his system should be incented at a higher level as a customer currently paying into the REST tariff, not the 2kWac level allowed by TEP. Second, Mr. Polivka stated he was confused that the incentive is based on Wac, rather than Wdc, since the PV array generates direct current, not alternating current.[77]

75. Mr. Polivka wrote a detailed explanation as to why he believes TEP's engineering

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[75] Attachment A to the RECPP has three different sections containing requirements numbered 2 and 3. TEP apparently is referring to Installation Requirements Standards Nos. 2 and 3, page 1-9.

[76] Hearing Exhibit TEP-4.

[77] Exhibit to Complaint, email from Viktor Polivka to Blanka Anderson, dated April 23, 2010, 8:20 a.m.

assumptions about battery back-ups and TEP's dismissal of his alternative plan using multiple meters were erroneous. Mr. Polivka also complained that Mr. Lindsey never provided him with a written inspection report explaining his findings after the site visit. Further, Mr. Polivka stated that TEP denied him the proper incentive because TEP did not like the Xantrex equipment he installed, claiming TEP prefers that customers use Sunny Boy products. Mr. Polivka also noted that in conversations and emails with Mr. Lindsey, he learned TEP had provided an incentive to another customer with a battery back-up system. Mr. Polivka stated, "Contrary to your rules of 'NO BATTERIES ALLOWED' in fact you do have approved ONE customer with a battery back up system, but of course he did comply with one of your informal demands and is using a Sunny Boy product."[78]

76. Ms. Anderson responded to Mr. Polivka's email 45 minutes later, advising him she would give the email to her supervisor, and requesting that Mr. Polivka allow her supervisor some time to review the email.[79] On April 26, 2010, three days after sending his list of issues about TEP's offered incentive to Ms. Anderson, Mr. Polivka filed an informal complaint with the Commission's Consumer Services Division.

77. On May 13, 2010, Mr. Polivka sent an email to Mr. Lindsey about the existence of a written inspection report that Mr. Lindsey supposedly generated after his April 2, 2010, visit to Mr. Polivka's home. According to Mr. Polivka, he received an email from TEP representative Andrea Lucero in which Ms. Lucero "referred to a 'TEP Inspection' that she had, and advised me that I needed to 'contact a TEP authorized installer' so as to 'correct the defects' on my Solar system so I could receive a TEP approval!"[80] Mr. Polivka demanded a copy of Mr. Lindsey's written inspection report.

78. In this email, Mr. Polivka made the following accusations:

> You indeed, did come into my home and looked around, but in fact did not inspect anything in my presence inside the home. You merely, checked the meter stand, to see if I was "transmitting any current to the Grid." You did not even go up to the roof, just to see the installation, nor to measure the angle the modules were set at.

[78] *Id.* (Emphasis original.)
[79] Exhibit to Complaint, email from Blanka Anderson to Viktor Polivka, dated April 23, 2010, 9:13 a.m.
[80] Hearing Exhibit TEP-5. TEP did not explain the impetus for Ms. Lucero's email.

> The failure to provide with the report, I then must assume that you came to my home UNDER FALSE PRETENCES to gain access into my home. If that is the case, I'll have to report this incident to the Tucson Police as an Unauthorized entry or criminal trespass? Then, proceed with what ever that complaint will demand. I'll give you 2 days to "produce such Inspection Report", if one indeed was written, since it is my legal right to "see what you reported" to TEP, in writing!
>
> To gain entry into a home with false pretences is not even allowed by law for the Police, much less a utility. I know you mentioned, that TEP is indeed a Monopoly and that TEP can set the rules as they see fit. I do not believe that that enter a private residence, under "so called official business" is—just to look around—is not within the realm of the Monopolies privileges as I understand the LAW in a free society.
>
> Hoping to hear from you in the very near future, and hopefully you'll send me the requested copy of the report, if indeed there is one. If not, I'll proceed with the criminal portion and see what the courts have to say about it.[81]

79. Mr. Lindsey testified that he did not respond to this email, but quickly forwarded it to his supervisor because of the criminal complaint threats.[82] From that point forward, Mr. Lindsey did not respond to Mr. Polivka's emails, although he did prepare TEP's December 29, 2010, letter to Mr. Polivka.[83] For her part, Ms. Anderson testified there came a point in the summer of 2010 that she asked Mr. Polivka not to call her anymore because "his conversations were hostile."[84]

Jurisdictional Permit and Inspection Issues

80. The 2010 RECPP requires that a UFI applicant must obtain a Jurisdictional Permit before TEP will perform the final inspection approving a customer's system.[85] Mr. Polivka's solar electric construction project is within the City's jurisdiction, but as of the date of the hearing, Mr. Polivka had yet to get a permit from the City for his system.

81. Mr. Polivka stated there are two reasons for this. One is that the City will not perform an inspection of his mobile home until he provides the City with a report from a structural engineer verifying that the mobile home is capable of withstanding the loads placed on the roof by the system.[86] Mr. Polivka claimed that he called a number of structural engineers trying to locate one

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[81] *Id.* (Emphasis original.)
[82] Tr. at 150-151.
[83] *Id.*
[84] Tr. at 84.
[85] Hearing Exhibit TEP-6, page 1-11.
[86] Tr. at 271-273; Hearing Exhibit TEP-1.

who would inspect the trusses under the roof and certify that the roof would be able to support the system's weight, but he could not find a structural engineer willing to inspect the mobile home's roof.[87] According to Mr. Polivka, one engineer he contacted told him that structural engineers will not perform evaluations of mobile homes because of insurance issues.[88]

82. Mr. Polivka stated that DSD will review his documents and plans for him at a cost of $125, but Mr. Polivka testified he said to the DSD employee, "'[Y]ou could be reviewing it for the next 20 years, and each time I give you $125 to review it and it goes back and forth.'"[89] Mr. Polivka stated he has not yet provided these documents to the City; "It was completely dropped."[90]

83. During cross-examination, Mr. Polivka testified that he could not get a permit on his mobile home because "the inspector wants me—since I can't find an engineer willing to do it in town, they suggested that I take the roofing off so [DSD] can look at the trusses. I told them, 'Get the hell out of here.' … I approved [the trusses]. These are the federal codes that that mobile home was built to. I don't need to take the roof apart for you to inspect…. So, obviously, I will not get [a permit] because I'm not going to play their game."[91]

84. Mr. Lindsey testified that during the site visit, Mr. Polivka talked about his problems getting a permit from the City. According to Mr. Lindsey, Mr. Polivka wanted him to review the structural drawings of the home and sign off on them. Mr. Lindsey stated he explained to Mr. Polivka that he was an electrical engineer and did not have the right background and this was not something that TEP does; TEP relies on the City's analysis and inspection of the structure underlying the solar electric system.[92] In its Answer, TEP explained that in order to ensure the customer's safety, the Company requires a permit from the City verifying that the customer's solar configuration and installation meets all applicable building codes. TEP called DSD and spoke with DSD employee Ken Van Karsen, who stated that DSD was still waiting for information and documentation from Mr.

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[87] *Id.*
[88] Hearing Exhibit TEP-1.
[89] Tr. at 273.
[90] Tr. at 271-273; Hearing Exhibit TEP-1.
[91] Tr. at 47, 60. Mr. Polivka stated that before he installed the PV array, he augmented the roof by installing metal roof panels. Additionally, he claims the roof's support structure includes 34 trusses. (Answer, Exhibit 3, Informal Complaint, page 1.)
[92] Tr. at 138-139.

Polivka.[93]

85. The second reason Mr. Polivka claims for not yet obtaining the permit is that the City requires a letter from the applicant's utility verifying the grid tie-in. DSD's permitting requirements document (attached as Exhibit E) reads, "Letter from utility company acknowledging grid-tie in PV system, *unless the project SunShare*."[94] Mr. Polivka insists a City employee told him that TEP has to provide this letter before the City can issue the permit, but TEP refuses to provide it.[95]

86. In its Answer, TEP denied this allegation, stating that the Company is not aware that the City requires any letter from TEP, and Mr. Van Karsen confirmed that DSD does not need this letter from the Company.[96]

87. One of Mr. Polivka's biggest objections is that TEP told him a number of times that a Jurisdictional Permit was not required for an Off-Grid UFI, but in TEP's December 29, 2010, letter the Company stated the permit is required.[97] Mr. Polivka stated that he had decided to choose an Off-Grid incentive, rather than On-Grid, because of TEP's representations that he would not need to provide a permit.[98]

88. At hearing, Mr. Lindsey testified that during the site visit and in certain emails, he told Mr. Polivka that TEP did not require the Jurisdictional Permit for an Off-Grid UFI, but he later learned that this information was incorrect. Mr. Lindsey stated he now understands that the terms of the RECPP require a permit from the City in order to qualify for any TEP UFI.[99] In its Answer, TEP stated that the Off-Grid incentive the Company offered in April 2010 would have been available only after Mr. Polivka's system had passed inspection by the City.[100] TEP expressly informed Mr. Polivka

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[93] Answer, page 3.
[94] Exhibit to Complaint, City of Tucson Developmental Services Department Residential Photovoltaic Template Electrical Equipment Requirements. (Emphasis added.)
[95] Complaint, page 3; Tr. at 273, Answer, Exhibit 3, Informal Complaint, page 3.
[96] Answer, page 3.
[97] Letter to Docket dated January 27, 2011, Exhibit #2A, email from Viktor Polivka to Chris Lindsey, dated January 6, 2011, 1:46 p.m.
[98] Motion to Dismiss Tucson Electric Power Company Motion to Dismiss, dated September 10, 2010, page 2.
[99] Tr. at 139-140; Hearing Exhibit TEP-6, RECPP, Attachment A, Equipment Standard Number 7, page 1-9, and General Requirement Number 4, page 1-11.
[100] Answer, page 4. TEP's April 2010 offer letter did not state that the Jurisdictional Permit is required before TEP will pay the Off-Grid incentive. The letter simply states, "If you'll respond via email in agreement to this incentive, I would be more than happy to process an incentive for you." (Hearing Exhibit TEP-4.)

of its change in position regarding the necessity for the permit its December 29, 2010, letter.[101]

89. In his Complaint, Mr. Polivka stated that his system "was inspected by a TEP Engineer on 04/09/2010[102] @8AM, when he approved the system for Off Grid...."[103]

90. TEP interpreted Mr. Polivka's statement to mean that he believed TEP's final inspection had been performed and that TEP had approved the system. TEP denied the Company has completed the final inspection of Mr. Polivka's system, noting that Mr. Lindsey went to Mr. Polivka's home to evaluate the system for eligibility in TEP's incentive program.[104] In the emails setting up the meeting time, Mr. Lindsey never stated that the purpose of the visit was to perform the final inspection of Mr. Polivka's system.[105] Mr. Lindsey explained that in his engineering position he performs project commissioning, but he does not usually perform inspection work. According to Mr. Lindsey, there is a group of TEP inspectors on the residential side of the renewable energy department whose job it is to perform final inspections.[106]

System Configuration and Component Issues

91. TEP's 2010 RECPP states that storage batteries are not allowed as part of a solar electric system unless the batteries are configured in such a way that the battery bank will not interfere with TEP's ability to measure the PV array's full output.[107] Mr. Lindsey testified he advised Mr. Polivka during the site visit that, because the battery bank is placed in a manner prohibited by the RECPP, Mr. Polivka could not qualify for an On-Grid UFI unless he reconfigured his system to locate the storage batteries as required by TEP.[108]

92. Mr. Polivka argues TEP's requirement that he move the battery bank to TEP's required position is unreasonable because this will likely result in higher electric bills, reduced system efficiency and energy conservation, and additional system expenses.

93. According to Mr. Polivka, if he placed the battery bank on the AC side of his system

[101] Hearing Exhibit TEP-7.
[102] The actual date of Mr. Lindsey's site visit was April 2, 2010.
[103] Complaint, page 3; Tr. at 54.
[104] Answer, page 3; Tr. at 135-136.
[105] See Exhibits to Complaint, emails between Chris Lindsey and Viktor Polivka, dated March 30, 2010, 2:33 p.m., April 1, 2010, 6:16 a.m., 8:12 a.m., and 8:21 a.m.
[106] Tr. at 138.
[107] Hearing Exhibit TEP-6, page 1-10.
[108] Tr. at 137; Hearing Exhibit TEP-4; Hearing Exhibit TEP-7.

in order to remain on-grid, this would make TEP happy, but cost him more money. Mr. Polivka explains that if his batteries were on the system's AC side and they needed to collect energy to recharge, the necessary current might come from electricity generated by his PV array, but it might also come from electricity through TEP's service line, especially at night when the PV array is not harvesting energy. Mr. Polivka believes that this would have a negative effect on his earned net metering credits because if energy from the grid is used to charge his batteries, it would deduct credits. Once all the accumulated net metering credits are gone, any grid current needed to supplement the solar electric system's shortfalls would be billed at "premium rates" resulting in a higher electric bill. If his batteries are placed on the DC side of the system, Mr. Polivka knows that any energy required by the batteries will come solely from the PV array. [109]

94. In his Complaint, Mr. Polivka alleged that TEP's inability to earn money from his system as currently configured is why his On-Grid application was denied, stating, "[T]hese systems do indeed minimize or entirely eliminate the customers monthly electric bill, while earning [net-metering] credits payable to the customer at the end of the year. Request reversal of disapproval by TEP on bias self-serving evaluation of a system that meets all standards."[110]

95. On cross-examination, Mr. Lindsey agreed with Mr. Polivka's assessment that an AC-side battery bank could pull power from either the PV array or the grid in order to recharge, but he reiterated that because TEP has provided an up-front incentive to a customer in exchange for ownership of the generated RECs, TEP's main concern is ensuring the entirety of energy harvested by the customer's system is measured.[111]

96. Mr. Polivka also believes that TEP's configuration requirements are unreasonable because batteries placed on the AC side are much less energy efficient than those placed on the DC side. Mr. Polivka explains that in his system's current configuration, the PV array generates direct current which flows to the batteries where it is stored as direct current. Energy not required by the batteries goes on to the DC/AC Inverter where some of the energy is lost in the inversion process, but

[109] Exhibit to Complaint, "Net Metering Billing;" Tr. at 190-191; Motion to Dismiss Tucson Electric Power Company's Motion to Dismiss, page 2.
[110] Complaint, page 2.
[111] Tr. at 184.

it will only need to go through the process once. If the batteries are on the AC side, the energy comes from the PV array, directly through the DC/AC Inverter, resulting in the same power loss. But in order to charge the batteries, the alternating current must flow through an AC/DC charge controller so the energy can be stored in the battery as direct current—resulting in another loss of energy. When power is required from the batteries, it must again be converted from DC to AC, causing yet another loss of energy. Mr. Polivka believes this would result in an overall conversion loss of 30 to 40 percent; [112] but with his configuration, Mr. Polivka claims there is only a four to six percent loss according to the data gathered by his Xantrex configuration software.[113]

97. Mr. Polivka states that he also finds ironic TEP's concerns about batteries pulling more energy as they age as one reason they cannot be placed on the DC side. Mr. Polivka notes that batteries will age and require more energy to recharge no matter what side of the system they are on, but he claims TEP wants the batteries on the AC side so they can recharge using grid current, ultimately earning TEP more money.[114]

98. Mr. Polivka asserts that in addition to higher electric bills, he would have to incur more system costs to come into compliance with TEP's battery placement requirements. Mr. Polivka explained that the system specifications for his Xantrex equipment require the battery back-up to be placed on the DC side of the system. Xantrex does not manufacture the AC/DC charge controllers necessary to place the battery bank on the AC side and he would have to purchase a new charge controller. Mr. Lindsey testified that he agreed with Mr. Polivka that Xantrex's DC/DC charge controllers would not work properly if placed in the position required by TEP.[115]

99. Mr. Polivka also argues that he presented a viable option to TEP that would allow him to maintain his system as it is currently configured and still qualify for an On-Grid UFI,[116] but TEP dismissed Mr. Polivka's solution, claiming it would still not allow TEP to accurately measure the system's output.[117]

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[112] Letter to Docket dated January 27, 2011, Exhibit #2A, page 1; Answer, Exhibit 3, Informal Complaint, page 2.
[113] Answer, Exhibit 3, Informal Complaint, page 2.
[114] Tr. at 167-168.
[115] Tr. at 164-165.
[116] Exhibit to Complaint, email from Viktor Polivka to Chris Lindsey, dated April 3, 2010, 9:35 a.m.
[117] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated April 7, 2010, 2:05 p.m.

100. In his Complaint, Mr. Polivka also alleged that TEP denied his application because he did not use the Sunny Boy equipment preferred by TEP.[118]

101. In its December 29, 2010, letter to Mr. Polivka, TEP addressed Mr. Polivka's objections to the Company's battery back-up requirements. TEP reiterated that Mr. Polivka's system as it is currently installed does not comply with RECPP requirements regarding storage batteries. TEP denied Mr. Polivka's assertion that the Company rejected the On-Grid application because he installed Xantrex equipment, stating:

> As discussed before, the issue is not with the Xantrex equipment, but rather how the battery backup system is configured. The Xantrex battery backup system as installed integrates the battery bank on the DC side of the system. The power created by the panels is either stored in the battery bank via a charge controller (DC-DC converter in this case) or sent on to the DC side of the inverter. This inverter then inverts DC to AC. Since TEP can only meter the output of the system on the AC side, there is no way to eliminate the losses associated with the battery bank from the metered values. TEP cannot pay a full incentive for a system like this because the Company would never realize the [RECs] paid for; this is not a reasonable use of ratepayer funds. Moreover, as batteries age they become less efficient, requiring more and more energy from the solar system to keep them charged. With the battery bank located before the [DG Meter], an unknown amount of energy will be produced by the system and never registered by the [DG Meter] because the energy will be going straight to the batteries.[119]

Incentive Issues

102. Under the 2010 RECPP, there are three types of UFIs that a customer may qualify for: 1) On-Grid, which results in the highest incentive amount available under the program; 2) Off-Grid for a customer currently paying into the REST tariff, which results in a lower incentive amount; and 3) Off-Grid for a customer *not* currently paying into the REST tariff, which results in the lowest incentive amount.

103. The 2010 RECPP allows for an On-Grid incentive based on a system size of up to 20kWac, at a standard incentive amount of $3.00 per Wdc. An Off-Grid UFI for a customer currently paying into the REST tariff allows an incentive based on a system size of up to 4kWac, at a standard incentive amount of $2.00 per Wdc. An Off-Grid UFI for a customer not currently paying into the REST tariff allows an incentive based on a system size of up to 2kWac, at a standard

[118] Complaint, page 2; Exhibit to Complaint, email from Viktor Polivka to Blanka Anderson, April 23, 2010, 8:20 a.m.; Answer, Exhibit 3, Informal Complaint, page 2.
[119] Hearing Exhibit TEP-7, page 1.

incentive amount of $2.00 per Wdc.

104. Mr. Polivka points out TEP's incentive calculations state that system size limits are based on Wac, but the UFI amount is determined by applying the standard incentive amount on a per Wdc basis and he finds this confusing.[120]

105. In his testimony, Mr. Lindsey confirmed that the system size caps for the respective incentives are based on a system's Wac output. For example, for a customer seeking an Off-Grid UFI who is not currently paying into the REST tariff is subject to a system size cap of 2kWac, even if the customer's system is rated higher than 2kWac. However, as noted by Mr. Polivka, the incentive amount owed to the customer is ultimately calculated on a per Wdc basis, not a per Wac basis. Mr. Lindsey testified that there is a practical purpose behind this inconsistency.[121]

106. Mr. Lindsey explained that as harvested energy flows from the PV array as direct current, some of the energy will be lost as it moves through the DC/AC Inverter. Because of this loss, the customer would not be compensated for the actual amount of energy generated by the PV array. In order to make up for this loss, TEP created an AC to DC conversion factor that begins with the maximum system size allowed for a particular incentive, 2kWac for example, and works backward to determine how many watts of direct current would had to have been generated by the PV array in order to reach the maximum allowed watts of alternating current. Mr. Lindsey testified that TEP determined an appropriate conversion factor was 70 percent, although he believes that allowing for a 30 percent DC to AC loss is generous; losses are likely less.[122] By applying the AC to DC conversion factor, TEP is able compensate the customer for the full amount of energy initially generated by the PV array. [123] As such, a customer with a 2kWac system size cap could receive an incentive based on total of 2,857Wdc (2kWac/.7 AC/DC conversion factor = 2857Wdc, rounded). Mr. Lindsey stated that this conversion factor is not stated in the 2010 RECPP, but TEP applies it uniformly to all solar electric incentive calculations.[124]

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[120] Exhibit to Complaint, email from Viktor Polivka to Blanka Anderson, dated April 23, 2010, 8:20 a.m.
[121] Tr. at 143.
[122] Tr. at 145.
[123] Tr. at 143-145.
[124] Tr. at 227-228. Unlike the 2010 RECPP, TEP's 2011 RECPP includes the AC to DC conversion amounts for each system size cap.

107. Mr. Lindsey explained that another requirement of the 2010 RECPP is that a self-installed system is entitled only to 70 percent of the standard incentive amount.[125] TEP witness Marc Romito testified that, in his opinion, TEP's 2010 RECPP contains this provision because when the renewable energy programs were created, much of the focus was on ways to subsidize the solar industry. Mr. Romito stated that mechanisms were put in place "to help keep the solar industry safe from self-installs, from do-it-yourself projects."[126] Mr. Romito also explained that when TEP prepares its annual REST application, which includes the RECPP, for submission to the Commission, its proposed plan is vetted through a stakeholder process and solar energy system installers are part of that process.[127] Mr. Romito believes the requirement that self-installed systems be calculated at 70 percent of the standard incentive is no longer part of TEP's RECPP. [128] We note that TEP's 2011 RECPP does not contain any incentive provisions for self-installed systems, requiring that, in order to receive an incentive, a customer's system must be installed by a qualified installer.[129]

108. Both Ms. Anderson and Mr. Lindsey stated that the final amount of the UFI is subject to observations made by TEP inspectors during the final inspection. During this inspection, TEP verifies that the system is producing energy, and checks the positioning of the solar panels. If the inspectors determine that the solar panels are positioned at less than optimal elevation and azimuth angles, those numbers are applied to the Derating Chart to determine if a Buydown is required. At this point, the final amount of the UFI is calculated.[130]

109. Mr. Lindsey testified that by applying these criteria to Mr. Polivka's situation, TEP determined that at the time the Company calculated the incentive, Mr. Polivka was off-grid and not paying into the REST tariff. Under the RECPP, the maximum system size for which Mr. Polivka could receive an incentive was 2kWac, even though his system is rated at over 5kWac. Applying the 70 percent AC/DC conversion factor to Mr. Polivka's system, TEP calculated that 2kWac was equivalent to 2,857Wdc. The standard incentive amount for an off-grid system under the 2010

[125] Tr. at 145; Hearing Exhibit TEP-6, page 1-7.
[126] Tr. at 238, 242.
[127] *Id.*
[128] Tr. at 242-243.
[129] TEP 2011 RECPP, page 16.
[130] Tr. at 102, 232-235; Hearing Exhibit TEP-6, Attachment B, page 1-12.

RECPP is $2.00 per Wdc, for a total incentive of $5,714. However, applying the rule that self-installed systems are only entitled to 70 percent of the standard incentive amount, the advantage gained by application of the AC/DC conversion factor is negated, resulting in TEP's Off-Grid UFI offer of $4,000.[131]

110. Mr. Polivka disagrees with TEP's conclusion that the Off-Grid incentive offered should be based on the fact that he was not paying into the REST tariff at the time TEP calculated his incentive in April 2010. Mr. Polivka points out that at the time he applied for an incentive, he was paying into the REST tariff. Mr. Polivka believes TEP told him that he qualified only for an Off-Grid UFI and demanded that he disconnect,[132] then purposely waited until he had entirely disconnected from TEP so the Company could offer him the lowest incentive possible.[133] Further, Mr. Polivka notes that he reconnected in late June 2010, so he missed paying into the REST tariff for only two months and he is still a TEP customer paying into the tariff.[134]

111. Ms. Anderson and Mr. Lindsey deny that they ever ordered Mr. Polivka to disconnect from TEP.[135] TEP points out that at the time the Company calculated the amount of the Off-Grid UFI, Mr. Polivka was, in fact, not paying into the REST tariff, and asserts that its calculations were correct under the RECPP.[136]

112. At the conclusion of Mr. Lindsey's testimony, he was asked what Mr. Polivka needed to do to qualify for an On-Grid UFI. Mr. Lindsey stated that Mr. Polivka would have to re-configure his system to place the battery back-up on the system's AC side and obtain a Jurisdictional Permit. Once these requirements were met, TEP could conduct the final inspection of Mr. Polivka's system. During the final inspection, TEP inspectors would check the elevation and azimuth angles of the solar panels and apply the numbers to the Derating Chart to determine if a Buydown would be required.[137]

113. Mr. Lindsey testified that Mr. Polivka could retain his system's current configuration

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[131] Tr. at 147-148; Hearing Exhibit TEP-4.
[132] Exhibit to Complaint, email from Chris Lindsey to Viktor Polivka, dated April 8, 2010, 7:25 a.m.
[133] Complaint, page 3; Motion to Dismiss Tucson Electric Power Company Motion to Dismiss, pages 6-7.
[134] Exhibit to Complaint, email from Viktor Polivka to Blanka Anderson, dated April 23, 2010, 8:20 a.m.; Hearing Exhibit A-2.
[135] Tr. at 83, 142-143.
[136] Hearing Exhibit TEP-4; Tr. at 148; Answer, page 4.
[137] Tr. at 232-235.

and receive an Off-Grid UFI, but he would still have to obtain the Jurisdictional Permit before TEP could conduct its final inspection. Buydowns based on the Derating Chart also apply to Off-Grid incentives.[138]

114. In his Complaint, Mr. Polivka stated:

> The offered $4,000 UFI is not appropriate, but merely an offer to minimize payout. The customer is indeed eligible to receive the full UFI as per application the sum of $17,136..., plus the allowed statutory interest accumulated since the filing of the application on February 22, 2010, not to exclude any punitive damages due to intentional delays to avoid payment of UFI as prescribed by ACC.[139]

115. At the conclusion of his testimony, Mr. Polivka was asked whether he would prefer an On-Grid or Off-Grid UFI. He replied, "I'll just take the off-grid just to get it behind me and get it over with because it's not worth it."[140] Mr. Polivka was asked how much he believes TEP owes him for this Off-Grid incentive. Mr. Polivka stated TEP owes him a UFI based on 5,000 watts because he is a TEP customer currently paying into the REST tariff, incented at $2.00 per watt.[141] Mr. Polivka believes that in addition to this per watt incentive amount, he is also entitled to another incentive, stating, "As per the application I applied for a 5,000 watt system at $2 per watt hour, and 70 percent of 5,000 for [self-]installation."[142] "[The application] doesn't say 'and/or.' It says, 'This is for the PVs. This is for the self-installed.'"[143] Based on Mr. Polivka's interpretation of the formulas on the applications, TEP owes him $17,136 calculated as follows: First incentive: 5,040[144] Wac x $2.00 standard incentive = $10,080. Second incentive: 5,040 Wac x $2.00 standard incentive = $10,080 x .7 for self-install = $7,056. Total amount of incentive: $10,080 + $7,056 = $17,136.

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[138] Tr. at 235-236.

[139] Complaint, page 3. Nothing in the 2010 RECPP, A.A.C. R14-2-1801, *et seq.*, or A.R.S. § 40-246 allows the Commission to assess interest. The Commission does not have the authority to assess either compensatory or punitive damages.

[140] Tr. at 269.

[141] Tr. at 269-270.

[142] Tr. at 269.

[143] Tr. at 38.

[144] 5,040Wac is the actual size of Mr. Polivka's system.

DISCUSSION AND ANALYSIS

116. Mr. Polivka alleges that TEP violated its Commission-approved 2010 RECPP by denying his UFI applications for self-serving and improper reasons and for failing to provide him with the appropriate UFI. Mr. Polivka asks the Commission to find that TEP has violated its 2010 RECPP and to order TEP to provide him with the proper type and amount of UFI.

117. TEP denies these allegations, responding that the Company has not denied Mr. Polivka's Off-Grid application, and has, in fact, offered him the UFI that he is entitled to once he meets the system requirements stated in the RECPP. TEP asks the Commission to find that the Company did not violate the terms of its RECPP and to deny any compensation for Mr. Polivka outside that permitted under the 2010 RECPP.

TEP's April 2010 UFI Offer

118. Mr. Polivka physically disconnected his system from TEP on April 15, 2010. One week later, on April 22, 2010, TEP offered Mr. Polivka an Off-Grid UFI of $4,000 because he was no longer paying into the REST tariff.

Mr. Polivka's Position

119. Mr. Polivka disputes the validity of TEP's Off-Grid UFI offer for a number of reasons. First, Mr. Polivka believes that because he was a TEP customer paying into the REST tariff at the time he submitted his applications in February 2010, he is entitled to a higher Off-Grid UFI. Second, Mr. Polivka believes that TEP told him he qualified only for an Off-Grid incentive and ordered him to disconnect from the system, intentionally waiting until he complied with this demand in order to offer him the lowest incentive possible. Third, he was off the system from April 15, 2010, through June 29, 2010, and only missed paying into the REST tariff for two months. Mr. Polivka is once again paying into the REST tariff as a TEP customer.

TEP's Position

120. TEP agrees that it told Mr. Polivka that he would need to disconnect from the system to qualify for an Off-Grid UFI, but TEP's witnesses deny they ever ordered Mr. Polivka to disconnect from TEP. According to Mr. Lindsey, Mr. Polivka announced in an email his intention to disconnect and Mr. Lindsey replied by advising Mr. Polivka of the steps he would need to take to complete the

disconnection process.

121. TEP asserts that at the time it prepared its incentive offer, Mr. Polivka was not paying into the REST tariff, and the only incentive Mr. Polivka qualified for was the lower Off-Grid UFI. TEP believes that under the terms in the 2010 RECPP, its UFI calculations and offer were correct.

Resolution

122. Mr. Polivka's argument that he is eligible for a higher UFI because he was still paying into the REST tariff that at the time he submitted his applications in February 2010 is incorrect. The RECPP states that "the incentive amount will be calculated at the time the application is approved for reservation,"[145] not at the time the UFI application is submitted.

123. From our review of the evidence and testimony, we do not believe that TEP "ordered" Mr. Polivka to disconnect from TEP or that TEP intentionally waited until Mr. Polivka disconnected in order to offer Mr. Polivka the lowest possible UFI. However, it is not clear from the evidence whether or when TEP might have offered the higher Off-Grid incentive to Mr. Polivka had he never disconnected from TEP. The emails sent by Ms. Anderson and Mr. Lindsey to Mr. Polivka never explicitly stated what he needed to do ensure that he would qualify for the higher Off-Grid incentive. When Mr. Polivka disconnected, TEP acted quickly and its offer to Mr. Polivka after he disconnected was more advantageous to TEP. Mr. Polivka reconnected to TEP a month and a half after he disconnected, and he is once again a TEP customer paying into the REST tariff.

124. TEP has never denied that Mr. Polivka may qualify for an incentive of some sort, but maintains that he must comply with the 2010 RECPP requirements first. The question is, under the facts of this case, what RECPP provisions can TEP require Mr. Polivka to comply with before he may receive an incentive and, once he has complied, what incentive amount must TEP provide.

The Jurisdictional Permit Requirement

Mr. Polivka's Position

125. In Exhibit #1A to the letter Mr. Polivka filed with the Commission on January 27, 2011, he states, "I like to remind you that you informed me on 04/09/2010 that you are approving my

[145] Hearing Exhibit TEP-6, page 1-5. It is unclear whether TEP intended its offer letter as a reservation approval, but given our findings here, the question is moot.

system for Off Grid, and that I DID NOT NEED TO HAVE A PERMIT FOR THE OFF GRID APPLICATION (check you E mail to me regarding the subject!)"[146] Although not specifically stated, we infer from comments similar to this in Mr. Polivka's filings and testimony that he desires the Commission to find that he does not have to provide a Jurisdictional Permit in order to get an Off-Grid incentive because TEP told him he did not need one.[147]

126. Mr. Polivka states that the City will not grant the permit until he provides them with a report from a structural engineer verifying that the mobile home's roof is capable of withstanding the system's loads, but he has not been able to find a structural engineer who will provide the report. Mr. Polivka testified that DSD will review his documents and plans for him at a cost of $125, but he has not yet provided these documents to the City.

127. Mr. Polivka believes that he should not have to comply with the City's structural demands because his mobile home is built to all federal safety standards and he has affirmed that the infrastructure of his mobile home is adequate to support the system. Mr. Polivka believes that this should be sufficient for the City and for TEP.

128. The second reason he claims for not yet obtaining the permit is that DSD requires a letter from the TEP verifying the grid tie-in, but TEP refuses to provide it.

TEP's Position

129. TEP admits it initially told Mr. Polivka he that did not need a Jurisdictional Permit for an Off-Grid incentive. TEP now states that this information was incorrect and under the RECPP, Mr. Polivka must obtain a permit as a prerequisite to any incentive.

130. In its Answer, TEP stated that it requires the permit to ensure the customer's safety. TEP explained that the permitting process falls under the City's jurisdiction and TEP relies on the City's findings that the structure supporting an incented solar energy system is in compliance with building codes, is structurally sound and able to withstand the system's load.

131. TEP denies that the City requires a letter from TEP acknowledging a grid tie-in. TEP stated it spoke with a DSD employee who confirmed that TEP does not need to provide this letter.

[146] Letter to Docket filed January 27, 2011, Exhibit #1A. See also, Tr. at 274.

[147] Mr. Polivka could not have requested this relief in his Complaint because he was not yet aware of TEP's change in position regarding the necessity for a Jurisdictional Permit for Off-Grid systems.

Resolution

132. TEP's 2010 RECPP Equipment Standard No. 7 for residential solar electric projects states in part, "The Customer System and installation must meet the requirements of all federal, state, and local building codes and have been successfully inspected by the building official having jurisdiction."[148] 2010 RECPP General Requirement No. 4 states, "Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale."[149] Additionally, page 3, Section 5, to both TEP's On-Grid and Off-Grid UFI REC Purchase Agreements attached to the UFI applications state, "The Customer System's DC Watt of installed [on-grid or off-grid] residential solar generating capacity shall be determined by Company following Company's receipt of a copy of the City or County building permit associated with the installation of the Customer System...."[150] Further, Item 10, on page 2 of Attachment A to both REC Purchase Agreements reads, "The Customer System and installation must meet the requirements of all federal, state, and local building codes and have been successfully inspected by the building official having jurisdiction," which is verbatim from the 2010 RECPP Equipment Standard No. 7 stated above.[151]

133. In spite of the abundance of written provisions stating that a Jurisdictional Permit is required for both on-grid and off-grid systems, TEP advised Mr. Polivka verbally and in writing at least three times that TEP does not require a Jurisdictional Permit for an Off-Grid incentive. TEP's April 2010 letter offering Mr. Polivka an Off-Grid UFI did not state that he must obtain the permit before he can receive the incentive.[152] Not until TEP's December 29, 2010, letter to Mr. Polivka did TEP explicitly correct its error.

134. As a public service corporation overseeing the implementation of Commission-approved programs, TEP has a responsibility to ensure that employees provide accurate information to customers about participating in TEP's programs, and TEP customers should be able to rely on the information given by TEP employees. In this instance, Mr. Polivka claims he believed the

[148] Hearing Exhibit TEP-6, page 1-7.
[149] *Id.*, page 1-11.
[150] Hearing Exhibit TEP-2.
[151] *Id.*
[152] In its Answer, TEP stated that the Off-Grid incentive offered in the April 2010 letter would require a permit. (Answer, page 4.)

representations made by TEP employees that he did not need a permit to qualify for an Off-Grid UFI, and given the difficulty he was having obtaining the City permit, Mr. Polivka concluded that the better option was to work toward an Off-Grid UFI, rather than the higher-incentive On-Grid UFI.[153] Also, by choosing the Off-Grid incentive, Mr. Polivka believed he would not have to incur the expenses associated with obtaining the permit.

135. Because of TEP's multiple representations that he did not need a Jurisdictional Permit to obtain an Off-Grid incentive, Mr. Polivka believes that the Commission should require TEP to issue an Off-Grid UFI without requiring a permit.

136. TEP stated that the RECPP requires the permit to ensure customer safety. TEP relies on the City's permitting and inspection findings that the structure supporting a solar electric system and the system's construction are in compliance with applicable building codes, are structurally sound and the infrastructure is strong enough to hold the system's load.

137. It is clear that Mr. Polivka moved forward with the construction of his system without obtaining a permit from the City, even though he knew a permit was required. This was a risk on Mr. Polivka's part, because he knew there was no guarantee that the City would grant him the permit. Nevertheless, Mr. Polivka asserts the City's structural requirements are unnecessary, pointing out that his mobile home complies with all federal safety standards and he affirms that the roofing structure is more than adequate to support his system. Mr. Polivka believes this should be sufficient for the City and for TEP. But the fact that his mobile home might conform to federal building codes does not mean that the mobile home can structurally and safely support a solar energy system. Construction permits exist for a reason, and neither the City nor TEP can forego a permit requirement simply because an individual insists that the roof is structurally sound and strong and the system is constructed properly.

138. Importantly, the structural demands Mr. Polivka objects to are the City's requirements—not TEP's. TEP cannot dictate to the City of Tucson what the City can and cannot require from a person during the permitting and inspection process. The City has the necessary

[153] Motion to Dismiss Tucson Electric Power Company's Motion to Dismiss, dated September 10, 2011, page 2; Exhibit to Complaint, email from Viktor Polivka to Chris Lindsey, dated April 3, 2010, 9:35 a.m.

expertise and knowledge to ensure that solar electric construction projects conform to all building codes and to structural and construction requirements. If Mr. Polivka has specific issues with the City's permitting requirements, he must take his issues to the City for resolution.

139. Mr. Polivka argues that he relied on TEP's representations when choosing to go with an Off-Grid UFI because he believed that he could then forego the expense of obtaining the permit and still receive an incentive. This is a tenuous argument because he had already learned from the City that, under the City code, he needed to obtain a building permit before constructing his system, which means that he should have paid the expenses and obtained the permit in the first place. Further, Mr. Polivka's construction of his system without the requisite City permits and inspections may be a violation of City code. We also note that Mr. Polivka constructed his system without reference to, or regard for, TEP's system and installation requirements, and then, after the system was built, complained that TEP's requirements were unreasonable.

140. TEP has a duty to provide safe and reliable power to its customers. Although TEP's employees may have mistakenly not communicated to Mr. Polivka that no incentive was possible unless he had obtained a jurisdictional permit for his system, that error does not justify or allow us to ignore the City's legitimate public safety interests in its building permit process and requirements; especially since Mr. Polivka was well aware that the *City* required a building permit.

141. Accordingly, for the reasons set forth herein, before Mr. Polivka may obtain either an On-Grid or Off-Grid incentive from TEP, he must obtain a Jurisdictional Permit for his system from the City of Tucson.

142. The evidence shows that the City has explained to Mr. Polivka what he needs to do to comply with the City's permitting requirements, but so far, he has not met those requirements. Mr. Polivka stated at hearing that he refuses to play the City's "games," so he believes it is unlikely that he will ever be able to obtain a permit from the City. If Mr. Polivka opts not to comply with the City's requirements and fails to get a Jurisdictional Permit, that is his choice and the incentive process ends.

143. However, if Mr. Polivka decides to take the necessary steps to get a permit from the City and move forward with the incentive process, we believe that TEP should appoint one

management-level employee familiar with the 2010 RECPP requirements to answer Mr. Polivka's questions. TEP must provide the name and contact information of the appointed employee to Mr. Polivka within 20 days of the effective date of this Decision. This person may also aid Mr. Polivka and DSD in clarifying whether the City requires a letter of acknowledgement from TEP.

Storage Battery Requirements

Mr. Polivka's Position

144. Mr. Polivka asserts that TEP's requirement that storage batteries are allowed on an on-grid system only if the battery bank is placed on the AC side of the system is self-serving and will result in additional costs if configured as TEP requires.

145. Mr. Polivka argues that when batteries placed on the system's AC side need to recharge, they could be drawing power from TEP having a negative effect on net metering credits and possibly resulting in a higher electric bill. In his battery bank's current location, Mr. Polivka knows it will pull energy only from the PV array and he will not incur any additional charges.

146. Mr. Polivka also points out that the Xantrex DC/DC charge controllers for his battery bank will work only when the battery back-up is located on the DC side of the system. According to Mr. Polivka, in order to comply with TEP's placement requirements, he would have to incur more system costs to obtain AC-side compatible charge controllers.

147. Mr. Polivka states that another reason TEP denied his On-Grid application is that he installed Xantrex components, not TEP's preferred Sunny Boy products, but Mr. Polivka claims that the Xantrex system is much more efficient than the AC-side storage batteries and TEP should permit him to use this system in its current configuration to promote energy efficiency and conservation.

148. Mr. Polivka claims to have found an alternative metering plan that would permit him to leave the batteries in their current position and allow TEP to accurately measure the harvested energy for its RECs. Mr. Polivka insists that his metering plan will work; it just requires more effort from TEP.

TEP's Position

149. TEP states it related to Mr. Polivka multiple times that under the RECPP, he would need to transfer his battery back-up from the DC side of the system to the AC side in order to qualify

for an On-Grid UFI. TEP explains that placement of the batteries on the DC side will prevent the Company from measuring the entire amount of energy harvested by the PV array, precluding TEP from getting the full benefit of the REC Purchase Agreement. TEP asserts that paying a UFI for a system knowing that the Company will not realize the full amount of RECs contracted for is a misuse of REST funds collected from ratepayers.

150. TEP declined to adopt Mr. Polivka's proposed metering alternative because, in spite of Mr. Polivka's assertions, TEP would still be unable to measure the full amount of energy generated by Mr. Polivka's solar array.

151. In his testimony, Mr. Lindsey did not dispute Mr. Polivka's assertion that placing the battery back-up on the AC side of the system might result in the batteries being charged with power from the grid. Mr. Lindsey also agreed that the Xantrex DC/DC charge controllers would not work on the AC side of the system and Mr. Polivka would have to purchase AC/DC charge controllers in order for his batteries to operate properly. Mr. Lindsey stated that Mr. Polivka's points may be valid, but TEP's greater concern is ensuring that the Company can measure the full amount of energy generated by the PV array.

Resolution

152. In his Complaint, Mr. Polivka requests that the Commission find that the location of his storage batteries does not create any metering issues for TEP and to direct TEP to accept his On-Grid application without having to move his battery bank.

153. Under the 2010 RECPP, there is only one stated exception to TEP's exclusion of storage batteries for an On-Grid system—the batteries must be placed so that they will not inhibit TEP's accurate measurement of RECs. In its current configuration, Mr. Polivka's system does not comply with this exception and the evidence shows that his batteries' location creates metering issues for TEP. We agree with TEP that paying an On-Grid UFI for a system when TEP knows it might not recoup the RECs it contracted for is not a reasonable use of the REST funds collected from ratepayers. We also note that Mr. Polivka's configuration difficulties could have been avoided if he had taken the time to research TEP's system requirements *prior* to purchasing and installing his system.

154. Accordingly, we find that in order to qualify for an On-Grid incentive, Mr. Polivka must re-locate his storage batteries as indicated by TEP.

Derating Chart and Buydown Requirements

155. TEP's 2010 RECPP Installation Requirements Nos. 5 and 6 state that a system's solar panels must comply with certain azimuth angle and elevation angle requirements.[154] If TEP finds during its final inspection that the solar panels are positioned at less than optimal azimuth and elevation angle requirements, the UFI will be subject to a Buydown under the Derating Chart.

156. During the hearing, Mr. Polivka asked Ms. Anderson a number of technical questions about the Derating Chart unrelated to its use in calculating incentives. Ms. Anderson testified that she has no experience with the Derating Chart beyond her use of it to calculate final incentives.[155] Mr. Polivka's questions seemed to indicate that he has a problem with the technical aspects of the Derating Chart, but he did not ask Mr. Lindsey any questions about it, so what issues Mr. Polivka may have had with the Derating Chart are unknown.[156]

157. We find that any incentive offered to Mr. Polivka is subject to Buydown if TEP learns in its final inspection that the solar panels are positioned at less than optimal elevation and azimuth angles as indicated on the Derating Chart.

On-Grid UFI Requirements

158. Based on the evidence and testimony presented, as well as our earlier findings, we find that in order for Mr. Polivka to obtain an On-Grid UFI, he must comply with the following requirements:

- Re-position his battery back-up as indicated by TEP;
- Obtain a Jurisdictional Permit from the City of Tucson; and
- Present the Jurisdictional Permit to TEP and pass final inspection.

[154] The Commission addressed the specifications of TEP's Derating Chart in Decision No. 70314 (April 28, 2008), pages 7, 11.

[155] Tr. at 84-88.

[156] Mr. Polivka had an opportunity to question Mr. Lindsey about the Derating Chart when he resumed his cross-examination of Mr. Lindsey on the second day of hearing. However, Mr. Polivka stated that he saw no use in cross-examining someone who he did not feel was qualified and who he believed had committed perjury. (Tr. at 219-224.)

159. We understand that re-positioning the battery bank and obtaining the permit from the City will take time. We are willing to grant Mr. Polivka more than enough time to meet the stated requirements, but the time for compliance should not be open-ended. We believe it is reasonable to require that Mr. Polivka meet these requirements no later than December 31, 2012.

Off-Grid UFI Requirements

160. Based on the evidence and testimony presented, as well as our earlier findings, we find that in order for Mr. Polivka to obtain an Off-Grid UFI, he must comply with the following requirements:

- Obtain a Jurisdictional Permit from the City of Tucson; and
- Present the Jurisdictional Permit to TEP and pass final inspection.

161. We believe it is reasonable to require that Mr. Polivka meet these requirements no later than December 31, 2012.

162. In addition, we believe it is reasonable to require Mr. Polivka to advise TEP in writing, within 30 days of the effective date of this Decision, which incentive he wishes to obtain. Mr. Polivka must file a copy of this letter with Docket Control, being sure to include this matter's Docket Number. Indicating an initial UFI preference will not preclude Mr. Polivka from deciding to seek a different incentive, but he should notify TEP and the Commission of any change in writing as soon as possible.

Amount of UFIs

Mr. Polivka's Position

163. Mr. Polivka believes he is entitled to one incentive based on his 5,040 watt system, at $2.00 per watt, and a second incentive at 70 percent of the first because he installed his system himself, for a total UFI of $17,136. Mr. Polivka asserts that this is the formula stated on both UFI applications.

TEP's Position

164. TEP asserts that any incentive amount owed to Mr. Polivka must be determined solely as permitted in the 2010 RECPP.

Resolution

165. Mr. Polivka claims that the formulas on the UFI applications entitle him to two different incentives for a total UFI of $17,136. Neither the RECPP nor the On-Grid and Off-Grid applications contain any provision supporting Mr. Polivka's calculations. We agree with TEP that any incentive owed to Mr. Polivka must be calculated by applying the terms of the 2010 RECPP.

166. We find that, if Mr. Polivka complies with the requirements stated earlier in this Decision, he shall qualify for the applicable incentive amount, as calculated below, and subject to Buydown if Mr. Polivka's solar array is placed at less than optimal azimuth and elevation angles as determined at TEP's final inspection.

167. Under the terms of the 2010 RECPP Mr. Polivka will be entitled to the following incentive for an On-Grid UFI:

Maximum system size:	20kWac
Mr. Polivka's system size:	5,040Wac
AC/DC Conversion factor:	5,040Wac/.7 = 7,200Wdc
Standard Incentive:	7,200Wdc x $3.00 per Wdc = $21,600
Self-Install— 70 % of Standard Incentive:	$21,600 x .7 = $15,120

TOTAL UFI FOR ON-GRID SYSTEM: $15,120

168. If Mr. Polivka wishes to proceed with an Off-Grid UFI as a customer paying into the REST tariff, under the terms of the 2010 RECPP he will be entitled to the following incentive:

Maximum system size:	4kWac
Mr. Polivka's system size:	5,040Wac (exceeds cap by 1,040Wac)
AC/DC Conversion factor:	4,000Wac/.7 = 5,714Wdc
Standard Incentive:	5,714Wdc x $2.00 per Wdc = $11,428
Self-Install— 70 % of Standard Incentive:	$11,428 x .7 = $8,000

TOTAL UFI FOR OFF-GRID SYSTEM: $8,000

169. If Mr. Polivka ultimately qualifies for an Off-Grid UFI but is no longer paying into the REST tariff, TEP's UFI calculation of $4,000 is correct.

170. We find that once Mr. Polivka has met the requirements for either an On-Grid or Off Grid incentive as discussed herein, TEP shall pay the applicable UFI within 30 days of TEP's

successful final inspection and shall file a Notice of Payment with the Commission, and that upon receipt of the UFI, Mr. Polivka and TEP will be subject to the terms of the 2010 RECPP and the applicable REC Purchase Agreement.

171. We find that if Mr. Polivka has not completed all requirements by December 31, 2012, TEP will no longer be obligated to pay a UFI to Mr. Polivka, and TEP shall file with Docket Control, as a compliance item in this docket, no later than January 31, 2013, a letter indicating that Mr. Polivka has not complied with the requirements of the 2010 RECPP and the terms of this Decision.

172. We find that if Mr. Polivka decides that he is no longer interested in pursuing a UFI from TEP, he must do so in a letter addressed to TEP and file a copy with the Commission.

CONCLUSIONS

173. TEP is a public service corporation and subject to the Commission's jurisdiction. The 2010 RECPP was approved by Commission Decision No. 71465 and TEP is obligated to follow the terms of that Decision and of the RECPP. Mr. Polivka filed his Complaint asking the Commission to find that TEP violated the terms of the RECPP in its course of dealings with him.

174. TEP rejected Mr. Polivka's On-Grid UFI application because he did not have a Jurisdictional Permit from the City and because the system's storage batteries were not configured properly. The evidence supports TEP's stated reasons for denying the On-Grid application, and these reasons are valid under the RECPP.

175. The evidence does not support a finding that TEP denied Mr. Polivka an incentive because he placed his system on a mobile home, because he installed the system himself or because he used battery components not preferred by TEP. In fact, the evidence shows that TEP attempted to work with Mr. Polivka in order to grant him an incentive in spite of these unusual circumstances.

176. At the time TEP offered Mr. Polivka an Off-Grid UFI of $4,000 as a customer not currently paying into the REST tariff, TEP's representatives had incorrectly told Mr. Polivka several times that he did not need to get a Jurisdictional Permit to qualify for the incentive. Additionally, the April 2010 offer letter did not state that Mr. Polivka would need to get the Jurisdictional Permit before TEP would pay the incentive. TEP subsequently informed Mr. Polivka that he must obtain the Jurisdictional Permit in order to receive an Off-Grid incentive.

177. We believe if TEP *had* paid the Off-Grid incentive without getting a Jurisdictional Permit from Mr. Polivka, there would have been a clear violation of the RECPP.

178. Mr. Polivka's strong commitment to renewable energy and his efforts to completely eliminate his reliance on fossil fuels in meeting his electricity needs are commendable. Yet it is plain from the evidence that Mr. Polivka planned, purchased and installed his system without first referring to TEP's system and installation requirements and by the time Mr. Polivka first contacted TEP in January 2010, construction of his system was well under way. Mr. Polivka's request for an incentive appears to have been an afterthought, rather than the motivation for construction of his system.

179. At the time the events outlined in this Decision occurred, TEP employees had been working with the new RECPP for just one year. When confronted with the novel circumstances surrounding Mr. Polivka's system—it was already self-installed on a mobile home, it contained improperly configured DC-side storage batteries and Mr. Polivka had constructed the system without first obtaining a construction permit from the City—the evidence demonstrates that TEP employees attempted to work with Mr. Polivka to find a way to provide him with an incentive.

180. TEP did make misrepresentations to Mr. Polivka about the necessity for a Jurisdictional Permit and has never apologized to Mr. Polivka for its error or for the frustrations caused by its error. Mr. Polivka's abrupt decision to entirely disconnect from the grid made it easy for TEP to offer the lower Off-Grid incentive without ever clearly explaining to Mr. Polivka what he needed to do to obtain the higher Off-Grid UFI. There is no question that TEP should have handled this situation better, but TEP's short-comings on these points do not constitute violations of the terms of its 2010 RECPP.

181. Accordingly, we find that TEP did not violate the terms of its 2010 RECPP in its course of dealings with Mr. Polivka.

CONCLUSIONS OF LAW

1. TEP is a public service corporation pursuant to Article XV of the Arizona Constitution and A.R.S. § 40-246.

2. The Commission has jurisdiction over TEP and the subject matter of this Complaint.

3. A.R.S. § 40-246(A) allows any person to make a written complaint to the Commission

setting forth any act or thing done or omitted to be done by any public service corporation in violation, or claimed to be in violation, of any provision of law or order or rule of the Commission.

4. Mr. Polivka filed a Complaint alleging that TEP violated the provisions of its Commission-approved 2010 RECPP.

5. Service of the Complaint was made upon TEP, and notice of the hearing was provided to TEP, as required by A.R.S. § 40-246.

6. Under TEP's 2010 RECPP, in order to obtain an On-Grid UFI, Mr. Polivka must reconfigure his storage batteries, obtain a Jurisdictional Permit from the City of Tucson and pass a TEP final inspection.

7. Under TEP's 2010 RECPP, in order to obtain an Off-Grid UFI, Mr. Polivka must obtain a Jurisdictional Permit from the City of Tucson and pass a TEP final inspection.

8. Under TEP's 2010 RECPP, the final amount of any UFI is subject to Buydown after final TEP inspection.

9. The evidence and testimony presented in this matter do not support a finding that TEP violated the provisions of its 2010 RECPP.

ORDER

IT IS THEREFORE ORDERED that Tucson Electric Power Company shall, within 20 days of the effective date of this Decision, provide the name and contact information to Mr. Polivka of a management employee appointed to provide Mr. Polivka with assistance in and information about complying with the 2010 Renewable Energy Credit Purchase Program.

IT IS FURTHER ORDERED that Mr. Polivka shall, within 30 days of the effective date of this Decision, notify Tucson Electric Power Company in writing whether he intends to pursue an On-Grid or Off-Grid incentive. Mr. Polivka shall file a copy of the letter, including this matter's Docket Number, with Docket Control.

IT IS FURTHER ORDERED that if at any time Mr. Polivka decides that he is no longer interested in pursuing an Up-Front Incentive from Tucson Electric Power Company, he shall do so in a letter addressed to Tucson Electric Power Company and file a copy of the letter, including this matter's Docket Number, with Docket Control.

IT IS FURTHER ORDERED that if Mr. Polivka intends to pursue an Up-Front Incentive from Tucson Electric Power Company, he shall obtain all necessary permits and pass all inspections required under the 2010 Renewable Energy Credit Purchase Program and as discussed herein, no later December 31, 2012.

IT IS FURTHER ORDERED that, once Mr. Polivka has complied with all system requirements and obtained all necessary permits and passed all required inspections, Tucson Electric Power Company shall, within 30 days of a successful final inspection of Mr. Polivka's system, and depending upon which option Mr. Polivka has chosen, pay to Mr. Polivka $15,120 for an On-Grid UFI, $8,000 for an Off-Grid Up-Front Incentive if Mr. Polivka is paying into the Renewable Energy Standard and Tariff program, or $4,000 for an Off-Grid Up-Front Incentive if Mr. Polivka is not paying into the Renewable Energy Standard and Tariff program, each subject to Buydown if Mr. Polivka's solar panels are positioned at less than optimal azimuth and elevation angles as determined at TEP's final inspection.

IT IS FURTHER ORDERED that, upon receipt of the applicable Up-Front Incentive, Mr. Polivka and Tucson Electric Power Company will be subject to the terms of the 2010 Renewable Energy Credit Purchase Program and the terms of the applicable executed Renewable Energy Credit Purchase Agreement.

IT IS FURTHER ORDERED that, upon payment of the applicable Up-Front Incentive to Mr. Polivka, Tucson Electric Power Company shall file with Docket Control, as a compliance item in this docket, within 30 days of payment, a Notice of Payment indicating the date and amount of payment and shall attach a copy of the applicable executed Renewable Energy Credit Purchase Agreement.

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IT IS FURTHER ORDERED that if Mr. Polivka fails to obtain all necessary permits and pass all required inspections by December 31, 2012, Tucson Electric Power Company's obligations under this Decision shall cease without further action by the Commission, and Tucson Electric Power Company shall file with Docket Control no later than January 31, 2013, a letter indicating that Mr. Polivka has not complied with the requirements of the 2010 Renewable Energy Credit Purchase Program and the terms of this Decision.

IT IS FURTHER ORDERED that this Decision shall become effective immediately.

BY ORDER OF THE ARIZONA CORPORATION COMMISSION.

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

IN WITNESS WHEREOF, I, ERNEST G. JOHNSON, Executive Director of the Arizona Corporation Commission, have hereunto set my hand and caused the official seal of the Commission to be affixed at the Capitol, in the City of Phoenix, this 4th day of April 2012.

ERNEST G. JOHNSON
EXCUTIVE DIRECTOR

DISSENT _____

DISSENT _____

SERVICE LIST FOR: VIKTOR PETER POLIVKA vs. TUCSON ELECTRIC POWER COMPANY

DOCKET NO.: E-01933A-10-0340

Viktor Polivka
4675 South Harrison Road, #82
Tucson, AZ 85730

Melody Gilkey
TUCSON ELECTRIC POWER
88 East Broadway Boulevard
Tucson, AZ 85701

Jason Gellman
ROSHKA DEWULF & PATTEN, PLC
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Janice Alward, Chief Counsel
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1200 West Washington Street
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Steven M. Olea, Director
Utilities Division
ARIZONA CORPORATION COMMISSION
1200 West Washington Street
Phoenix, AZ 85007

EXHIBIT A

Excerpted Portions of Tucson Electric Power Company's 2010 Renewable Energy Credit Purchase Program

Uniform Credit Purchase Program

Renewable Energy Credit Purchase Program

Exhibit 5

Tucson Electric Power Company

Uniform Credit Purchase Program

Renewable Energy Credit Purchase Program

("RECPP")

Definition

2010 – 2014

FINAL

Table of Contents

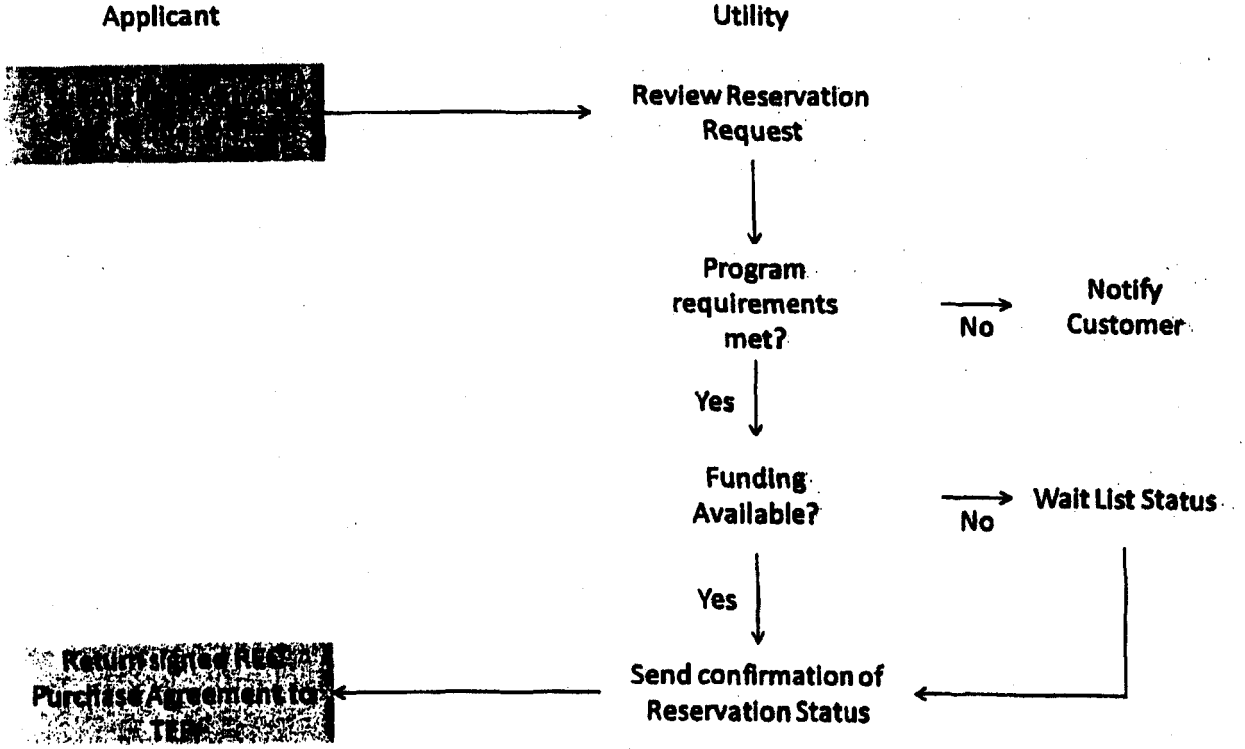
Solar Electric: Residential Projects Smaller Than 20 kW and Commercial Projects Smaller Than 100 kW

Tucson Electric Power Company ("TEP" or the "Company") is committed to assisting our customers in developing their own renewable generation resources, through a balanced and supportive renewable energy distributed generation incentive program. Our goal is to create a program that will provide incentives for affordable, environmentally sensitive, customer-sited renewable energy generation systems to supplement TEP customer's energy needs. A properly designed system, matched to a customer's energy use, will provide a reduction in utility bills through the use of renewable resources. This program reflects our commitment to reduce the cost of developing renewable energy resources.

PROCESS FOR OBTAINING INCENTIVES

The process for obtaining incentives from TEP involves the flow of information between the applicant and TEP. The following sections reflect the typical three-step process.

Step 1 – Reservation Request and Assignment of Reservation Status



The applicant must first submit the reservation request to TEP.[1] The reservation request includes information about the TEP customer on whose property the system will be located, the Solar Electric system, the calculation of the incentive, and the installer of the system.

[1] Off-grid projects would submit a different version of the reservation request.

Residential Projects and Commercial Projects Smaller Than 100 kW

TEP will review the reservation request to ensure the application conforms to program requirements.

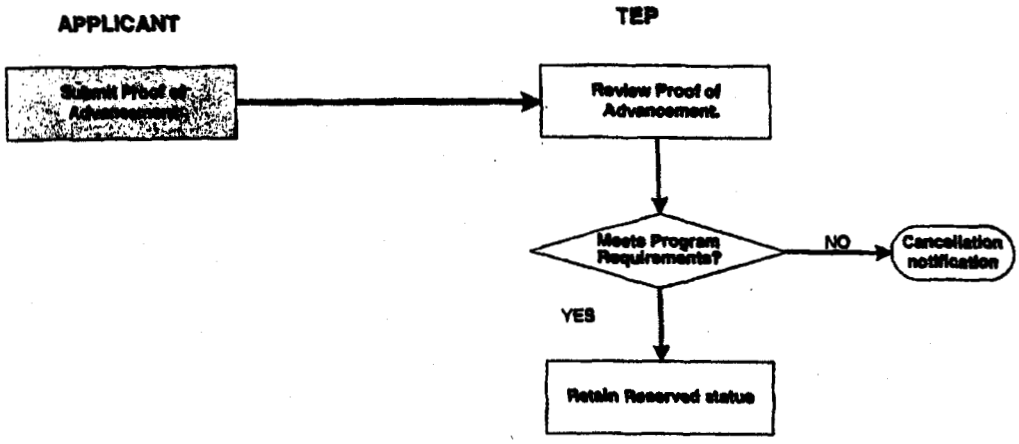
- Reservation requests for residential systems and commercial systems smaller than 100 kW are processed on a first-come, first-reserved basis.
- Reservation requests for residential systems and commercial systems smaller than 100 kW will be reviewed within 30 days of the utility's receipt of the request.

If the reservation request is approved, TEP will send a confirmation to the applicant. A reservation request may be denied for two different reasons, each with its own consequences:

- The reservation request may be denied because the request is not in compliance with program requirements. In this case, TEP will send notification to the applicant of the discrepancies and put the reservation in a "pending" status. The installer will have 14 days to provide the documentation required.
- The reservation request may be denied because it is not in conformance with program requirements. In this case, TEP will send notice that the request is cancelled.
- The reservation request may be denied because funding is not available. In this case, TEP will send a notification to the applicant that the request will be placed on a waiting list.

After reviewing the reservation request, TEP will assign a reservation status.

Step 2 – Proof of Advancement



Applicants for residential systems and commercial systems smaller than 100 kW must submit proof of project advancement to TEP within 60 days of the date of reservation confirmation from TEP to retain the reservation. Applicants for residential systems and commercial systems smaller than 100 kW must provide copies of city/county inspection permits to TEP as documentation of the proof of project advancement. If those permits are not available within 60 days of the date of reservation confirmation, the applicant may also provide these documents in place of the permits:

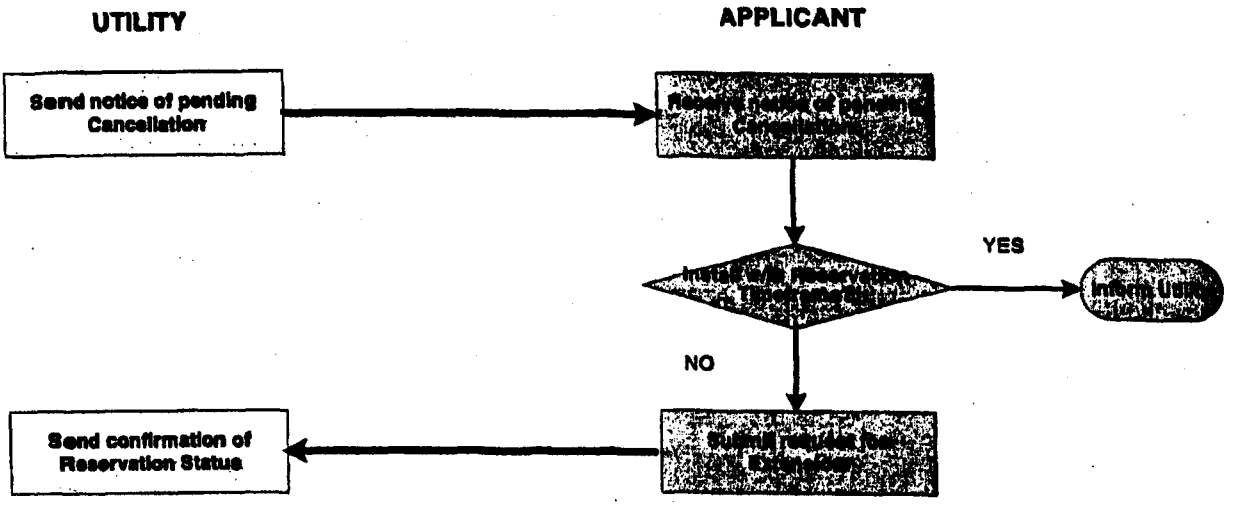
- Signed agreement
- Assignment of Payment form

Residential Projects and Commercial Projects Smaller Than 100 kW

- Initial city/county-permit application or actual receipt of final acceptance inspection paperwork from the city/county.

If proof of project advancement is not received within the specified timeframe, the applicant will be notified that the reservation is cancelled. The applicant has the option to reapply for funding after the reservation has been cancelled. The request will be processed in the same manner as a new project reservation and will be contingent upon availability of funding at the time the new application is received.

Conditional Step – Extension / Cancellation

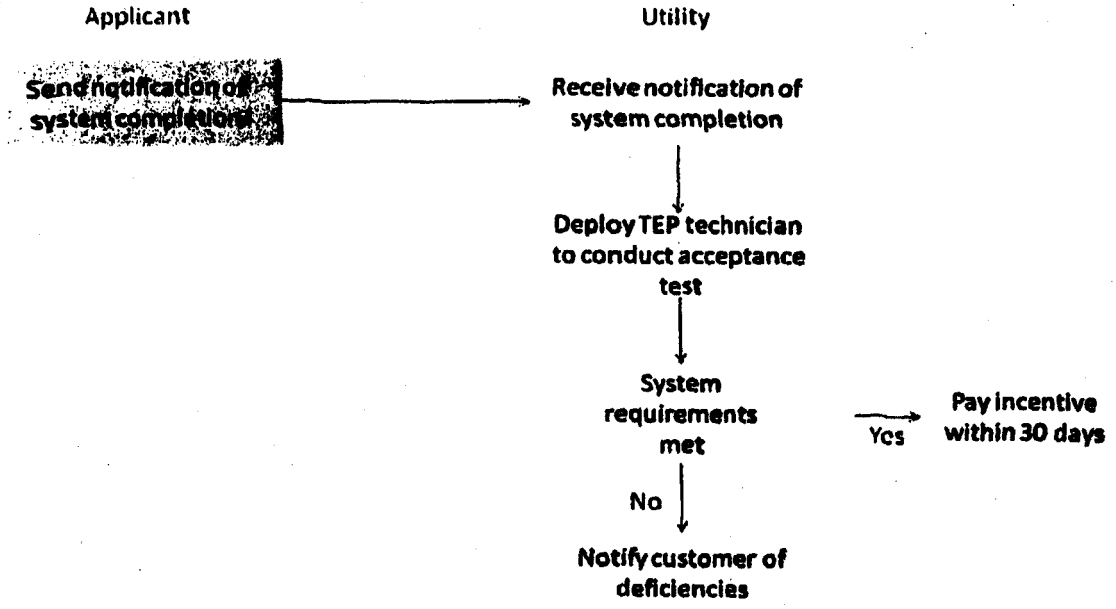


If all project requirements are not met within 180 days of the date of the reservation confirmation, the applicant must apply for an extension to remain eligible for the incentive. TEP will trigger this request for extension with a notice of the pending cancellation 30 days prior to the date of scheduled cancellation. TEP will grant an extension for up to 90 days following timely receipt of a customer's request for extension. TEP may approve written extension requests detailing the conditions for delay for periods beyond 90 days under extenuating circumstances.

If all program requirements have not been met within the reservation timeframe, a reservation request will be cancelled unless an extension is granted.

Residential Projects and Commercial Projects Smaller Than 100 kW

Step 3 – Customer Requests Payment



Upon project completion, the customer must notify TEP that the system has been placed in service. This should be done by submitting a copy of the city/county final inspection permit. When TEP receives notification that the system is complete, TEP will perform an "acceptance test." The acceptance test requires that a TEP inspector test the system's compliance with the required specifications and its performance and determine that it is in line with TEP requirements.

If the system meets TEP specifications and performance requirements, TEP will pay the customer the up-front incentive ("UFI") within 30 days of the acceptance test. If the system fails to meet TEP specifications and performance requirements, TEP will notify the customer within 5 days of the acceptance test. The customer will then have 30 days to address the deficiencies and notify TEP that the system is ready to be retested.

INCENTIVE LEVELS FOR RESIDENTIAL SOLAR ELECTRIC SYSTEMS AND COMMERCIAL SYSTEMS SMALLER THAN 100 KW

Residential Solar Electric systems and non-residential systems smaller than 100 kW are eligible for UFIs. UFIs are those incentives where the customer receives a one-time payment based on the system's designed capacity.

Table 1 identifies the incentives available for residential Solar Electric systems and non-residential Solar Electric systems smaller than 100 kW.

Residential Projects and Commercial Projects Smaller Than 100 kW

Table 1. Up-Front Incentives ($/Watt) for On-Grid Residential Solar Electric Systems and OnGrid Non-Residential Solar Electric Systems Smaller Than 100 kW, and Off-Grid.

Year	Residential	Small-Commercial	Off-Grid
2010	$3.00/W DC	$2.50	$2.00
2011*	$3.00/W DC	$2.50	$2.00
2012*	$3.00/W DC	$2.50	$2.00
2013*	$3.00/W DC	$2.50	$2.00
2014*	$3.00/W DC	$2.50	$2.00

Notes:
*Indicates that the incentive for that year has not yet been approved by the Arizona Corporation Commission ("ACC" or the "Commission"). As such, these incentives are tentative and may change pending Commission approval.

- On-Grid Residential customers will receive a UFI up to a cap of 20 kWac. If a residential system is installed larger than 20 kWac, TEP will only provide an incentive payment for the first 20 kWac.
- On-Grid Small commercial customers will receive a UFI up to a cap of 100 kWac. If a small commercial system is installed larger than 100 kWac, it must apply under the large commercial program.
- Off-Grid customers, residential or commercial, will receive a UFI up to a cap of 4 kWac.
- The UFI may not exceed 60% of total System Cost.
- The customer must pay at least 15% of the project cost, after other government incentives (e.g., tax credits) are considered. (See explanation of incentive calculation below.)
- Systems may not be eligible to receive RECPP incentives if other utility incentives are applied.
- As described later in this document, these incentive levels may be decreased because of sub-optimal system positioning.

The incentive amount will be calculated at the time the application is approved for reservation. If federal or state incentives change during the period of time after the reservation approval, the incentive amount reserved will not be changed as long as the reservation is not cancelled.

In return for TEP's payment of a UFI, TEP will be given complete and irrevocable ownership of the RECs until December 31st of the 20th full calendar year after completion of installation of the system. Operational life during that time frame must be supported by system warranty or planned maintenance schedules.

PROJECT FUNDING

Funds will be made available for reservations on a first-come, first-reserved basis, until annual funding is fully reserved. Reservations which are rejected as a result of insufficient funds will be placed on a waiting list and offered the opportunity to retain their original reservation date for one additional quarter without the need to resubmit application documentation. If the incentive level has changed from the date of the original reservation to the date when the reservation is approved, the new incentive level shall be applied.

Residential Projects and Commercial Projects Smaller Than 100 kW

NET METERING

RECPP incentives can be applied to systems designed to serve only the typical load of the customer with whom the incentive agreement has been established. The assessment of that typical load does not preclude the periodic production of electricity in excess of the customer's demand. All projects must comply with ACC net metering rules.

PROJECT REQUIREMENTS AFTER INSTALLATION

After completing the installation of a residential Solar Electric project or commercial Solar Electric project smaller than 100 kW, the customer must continue to provide information to TEP about the system's performance.

All customer systems receiving renewable energy self-generation incentives are obligated to include a TEP-supplied production meter, which will report system production to TEP in accordance with the regular meter-reading schedule. TEP, at its option, may perform periodic inspection of the system for operation, metered production, and reporting purposes.

THE FINE PRINT

In addition to the other requirements described in this hand book, there are three other types of program details of which system owners and installers should be aware:

1. Installer qualifications
2. Customer-installed systems
3. System removal

These are described in further detail below.

Installer Qualifications

All systems receiving incentives under the RECPP must be installed by a qualified installer. The following requirements must be submitted by the applicant as part of the reservation request. TEP will verify that the installer meets the following minimum qualifications prior to confirming a reservation request:

1. The installer must possess a valid license on file with the Arizona Registrar of Contractors ("AZROC") with a license classification appropriate for the technology being installed. Alternatively, the installer must identify use of a contractor holding an appropriate license on file with the AZROC for the technology being installed. A copy of the AZROC license must be provided as part of the reservation request.
2. The installer must possess an Arizona business license that is active and in good standing.

Installers may request that the above information be retained on file with TEP; however, under this option the installer must certify that the information on file remains current with the submission of each reservation request. Information on file must be renewed yearly.

Residential Projects and Commercial Projects Smaller Than 100 kW

Installations by Customer (Residential Solar Electric and Wind Only)

Residential customers may self-install Solar Electric systems 10 kWac or smaller providing they adhere to all applicable codes and standards. The customer-installed systems are eligible for an incentive equal to 70% of the standard UFI, as otherwise listed in Table 1, above. TEP reserves the right to withdraw this self-install qualification condition at any time in the future if TEP finds self-installations are not adhering to the applicable codes and standards or are found to be of poor quality workmanship.

System Removal

If receiving a UFI, neither the Qualifying System nor any components thereof shall be removed from the premises (by either the applicant or future owners or occupants of the property) until December 31st of the 20th full calendar year following completion of system installation of the renewable energy system, without express agreement of TEP. If the Qualifying System is removed by any party in violation of this provision, customer shall immediately reimburse TEP all incentive amounts paid by TEP to customer or on behalf of customer to an authorized third party.

In addition, if a Qualified System is removed, TEP shall monitor that specific customer site to ensure that an additional incentive is not provided for any new distributed renewable energy resource system on that site until the Renewable Energy Credit ("REC") contracted operational life of the original system has been completed.

ADDITIONAL RESOURCES

The following resources provide information regarding system installation and performance forecasting:

The California Energy Commission's Guide to Buying a Photovoltaic Solar Electric System at http://energy.ca.gov/reports/2003-03-11_500-03-014F.PDF

The Arizona Consumers Guide to Buying a Solar Electric System at www.azsolarcenter.com/design/azguide-1.pdf

Residential Projects and Commercial Projects Smaller Than 100 kW

ATTACHMENT A
System Qualifications for Residential Solar Electric Projects and Commercial Solar Electric Projects Smaller Than 100 kWac

All solar electric generating Customer Systems must meet the following system and installation requirements to qualify for Tucson Electric Power Company's ("TEP" or the "Company") Renewable Energy Credit Purchase Program ("RECPP"). Capitalized terms not defined herein shall have the meanings ascribed to them in the RECPP Agreement.

The following equipment qualifications listed are mandatory requirements which must be met at the time of project commissioning to receive a RECPP incentive. The installation guidance is intended to provide consumers with information on installation and operation practices which are most likely to support achieving the system's designed output. Installation guidance is mandated in order for a project to receive a RECPP incentive, as it does reflect both industry and TEP concurrence on those practices which are important for a technology to best achieve the designed output. In the future, additional installation guidance items may be considered for inclusion as part of the equipment qualifications.

TEP acknowledges that many regulations and site-specific requirements may apply to the installation of renewable energy technologies. TEP agrees that no requirement imposed by these technology criteria shall be imposed in conflict with any other governmental requirements. Any RECPP-based requirement, which is in conflict with a site-specific governmental requirement, shall be detailed in the reservation request. All qualifying systems must adhere to the following requirements in addition to the RECPP program requirements:

Equipment Standards

1. The Customer System components must be certified as meeting the requirements of IEEE-929 - Recommended Practice for Utility Interface of Photovoltaic Systems.[2]

2. The Customer System components must be certified as meeting the requirements of UL-1741 - Power Conditioning Units for use in Residential Photovoltaic Power and be covered by a non-prorated manufacturer's warranty of at least two years.

3. Photovoltaic components must be certified by a nationally recognized testing laboratory as meeting the requirements of UL-1703 - Standard for Flat Plate Photovoltaic Modules and Panels Systems and be covered by a non-prorated manufacturer's warranty of at least 20 years.

4. The inverter must be certified as meeting the requirements of IEEE-1547 - Recommended Practice for Utility Interface of Photovoltaic Systems, and it must be UL-1741 certified. Inverters must be covered by a manufacturer's warranty of at least ten years.

[2] Some technology-specific criteria reference third party standards. The requirements of those standards are fully applicable when referenced as part of technology specific criteria. TEP recognizes that new standards are likely to develop in the near future for technologies included in the RECPP, and recommends that the new standards are examined for application in this program definition as they become available.

Residential Projects and Commercial Projects Smaller Than 100 kW

5. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code, including Article 690 and all grounding, conductor, raceway, over-current protection, disconnect and labeling requirements.

6. All other electrical components must be UL listed.

7. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electrical Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.

8. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment.
See http://images.edocket.azcc.gov/docketpdf/0000074361.pdf for these requirements.

Installation requirements

1. A grid-connected Residential Customer System must have a total solar array nameplate rating of at least 1,200 watts DC and no more than 20,000 watts AC.

2. The Customer System installation must meet the TEP Service Requirements 2000 Edition, Page 1.20, as follows:

   "AN AC DISCONNECT MEANS SHALL BE PROVIDED ON ALL UNGROUNDED AC CONDUCTORS and SHALL CONSIST OF A LOCKABLE GANG OPERATED DISCONNECT CLEARLY INDICATING OPEN OR CLOSED. THE SWITCH SHALL BE VISUALLY INSPECTED TO DETERMINE THAT THE SWITCH IS OPEN. THE SWITCH SHALL BE CLEARLY LABELED STATING "DG SERVICE DISCONNECT."

3. The utility meter and utility disconnect will be installed in a location readily accessible by TEP during normal business hours.

4. Products must be installed according to manufacturers' recommendations.

5. The Customer System photovoltaic panels and modules must face within +/- 100 degrees of true south, and be substantially unshaded from 9 am to 3 pm. System arrays which are facing at an azimuth angle of more than 20 degrees from true south or shaded for more than one hour per day will be subject to a reduced amount of buydown payment per Attachment B.

6. The Customer System photovoltaic panels and modules must be fitted at an angle of 0 degrees to 60 degrees from horizontal. System arrays which are fitted with an elevation angle of less than 20 degrees or more than 35 degrees above horizontal will be subject to a reduced amount of buydown payment per Attachment B.

Residential Projects and Commercial Projects Smaller Than 100 kW

7. For Residential Customer Systems, Company will provide a meter and meter socket that will be installed in a readily accessible outdoor location by the Customer between the DC to AC converter and the connection to the over-current device in the Customer's electric service panel. For Non-Residential Customer Systems, Company shall provide the meter only, to be installed in a Customer supplied meter socket to be installed in a readily accessible outdoor location by the Customer between the DC to AC converter and the connection to the over-current device in the Customer's electric service panel. Installer must notify TEP of wiring configuration so that TEP may provide the appropriate 3-phase meter.

8. Total voltage drop on the DC and AC wiring from the furthest PV module to the AC meter will not exceed 2%.

9. PV panels and DC to AC inverter will be installed with sufficient clearance to allow for proper ventilation and cooling. At a minimum, manufacturer clearance recommendations will be observed. PV modules may be mounted less than 4 inches above any surface and an additional inch of clearance for each foot of continuous array surface area beyond four feet in the direction parallel to the mounting support surface, only in cases when arrays are flush-mounted to roof pitch. Otherwise, the four-inch spacing and an additional inch of clearance for each foot of continuous array surface area minimum is required.

10. Storage Batteries are not allowed as part of the Customer System unless the inverter is a separate component and TEP can locate the Solar Meter at the inverter's output. If configured otherwise, battery losses will adversely reflect in the annual AC metered energy output. Customer's solar energy generation and energy storage system must meet the requirements of 2 and 3 of this Attachment A.

11. The DC to AC inverter used must provide maximum power point tracking for the full voltage and current range expected from the photovoltaic panels used and the temperature and solar insolation conditions expected in Tucson, Arizona.

12. The DC to AC inverter must be capable of adjusting to "sun splash" from all possible combinations of cloud fringe effects without interruption of electric production.

13. TEP reserves the right to modify standards as technology changes on a case by case basis, pending independent laboratory analysis, Professional Engineer ("PE") stamp, or TEP engineering analysis.

General Requirements

1. All Customer System installations must be completed in a professional, workmanlike and safe manner.

2. Installation must have been made after January 1, 1997.

Residential Projects and Commercial Projects Smaller Than 100 kW

3. The Customer must be connected to the Company's electric grid, except for approved off-grid systems in conformance with the RECPP.

4. Systems must be permitted and inspected by the jurisdiction having authority over construction projects in the customer's locale.

5. The project must comply with applicable local, state, and federal regulations.

6. Products must be installed according to manufacturers' recommendations.

7. Installations must meet applicable governmental statutes, codes, ordinances, and accepted engineering and installation practices.

8. All major system components must be new and must not have been previously placed in service in any other location or for any other application.

9. All renewable electricity generation systems must include a dedicated performance meter (provided by TEP) which allows for measurement of system energy production. Certain other non-electric renewable energy production systems will require customer supplied metering for Performance Based Incentive ("PBI") payment calculation purposes.

10. PV system components shall be properly labeled, including AC & DC disconnects (if present), solar generation meter, service panel (outside cover), and breakers inside the service panel.

11. The system will in all cases have a material and full labor warranty of at least five years.

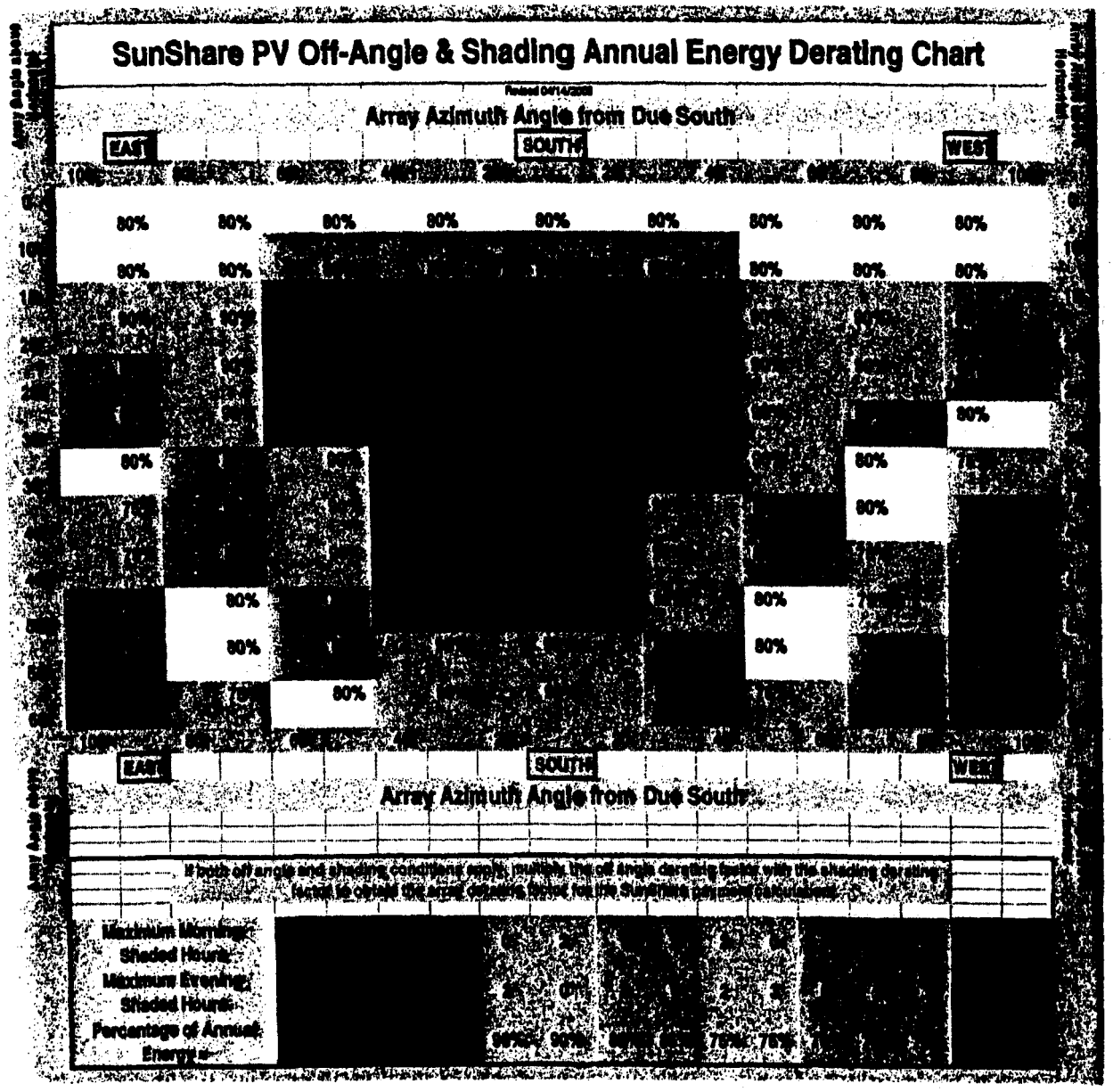
Additional Requirements for Off-Grid Systems

1. The minimum Solar Electric array size shall be no less than 600 Wdc. The maximum Solar Electric array size for customers currently paying into the REST tariff shall not exceed 4,000 Wac. For customers not currently paying into the REST tariff, systems shall not exceed 2,000 Wac.

2. Off-grid systems will not be metered. Compliance reporting production will be based on an annual 20% capacity factor using nameplate DC rating for capacity.

Residential Projects and Commercial Projects Smaller Than 100 kW

ATTACHMENT B
SunShare Solar Electric Off-Angle & Shading Annual Energy Derating Chart



Qualifying systems using Building Integrated Photovoltaic (BIPV) modules of total array capacity of 5 kWdc or less shall receive 90% of the UFI incentive value for PV systems listed in Attachment A. Systems using BIPV modules of total array capacity of greater than 5 kWdc shall be derated based on heating unless the applicant can demonstrate optimal performance.

EXHIBIT B

Tucson Electric Power Company
On-Grid Residential Solar Electric
Application of Viktor Polivka

SunShare Residential Solar Program
Grid-Tied Up Front Incentive (UFI)
Renewable Energy Credit
Purchase Agreement
Executed by Viktor Polivka

Attachment A
Grid-Tied Residential
Solar System Qualifications

Attachment B
SunShare PV Off-Angle & Shading
Annual Energy Derating Chart

OPTION # 1
OPTION # 1

Mobile Home
~~Attach Agreement~~ designed

* Manual in yard *

ACC APPROVED 4/10/08

TUCSON ELECTRIC POWER COMPANY
ON-GRID RESIDENTIAL SOLAR ELECTRIC APPLICATION

SunShare

Customer Information

Name (As it appears on utility bill) VIKTOR P POLIVKA
Mailing Address 4675 S. HARRISON RD LOT #82
City TUCSON, AZ Zip Code 85730
Street Address (If different from above) ______
Daytime Phone Number 520-303-7308
E-mail Address: PPOLIVKA1@COX.NET Account Number [redacted]
Operating Agent (If different from Customer) ______

Solar - PV System Information

Module Supplier Name KYOCERA / ALTE Nameplate DC Rating 210 watts
Module Manufacturer KYOCERA Type KD210GX LP Quantity of Modules 24
Module Warranty 20 year (Copy of warranty must be on file with Tucson Electric Power.)
Inverter Make and Model Number XANTREX XW4024-120/240-60
Inverter Warranty 5 years (Copy of inverter warranty must be on file with Tucson Electric Power).
Total Cost 49,344.60 PV Cost 18,705.50 Labor Cost SELF INSTAL
Estimated Installation Date MARCH 1, 2010

System Qualifications

The system must meet the requirements outlined in Attachment A and Attachment B of the On-Grid Residential Solar Up Front Incentive (UFI) or Performance Based Incentive (PBI) Agreements.

Rebate Calculation

Rebate Calculation: Nameplate DC Rating 210 Watts x Quantity of Panels 24 = System Size 5040 W

UFI Calculation for residential projects with a 10 year inverter warranty.
Rebate Calculation: 5040 kW (System Size) x $3.00 per W = 15,120
Rebate Calculation for Self-Install: ______ kW (System Size) x $3.00 x 70% = ______

DECISION NO. 73088

ACC APPROVED 4/10/08

UFI – Residential BIPV 5 kW DC or less

Rebate Calculation: _____kW (System Size) x $_____ x 90% = _____ (UFI)

PBI Calculation for residential projects with less than a 20 year module warranty or less than a 10 year inverter warranty or for residential projects with a BIPV system over 5 kW.

Estimated annual energy production of system _____kwh x PBI amount _____$/kwh = _____PBI

TEP rebate cannot be more than 60% of system cost. Customer must pay at least 15% of system cost.

Customer Reservation Bid

Customer may elect to use maximum PBI payback listed in the Project Incentive Matrix or choose a smaller PBI amount that will be more competitive in the period ranking system.

Project Information

Has a City/County Permit been secured? _____Yes ___✓___No

Is this an application for Net Metering: _____Yes ___✓___ No (Net metering applies to systems 10 kW AC or less)

Does this installation meet all ACC Interconnection/REST requirements? ___✓___Yes _____No

Installer Information

Installer/Dealer Name _____

_____

_____

Business Address _____

Arizona Registrar of Contractors (AZROC) License Information

AZROC License Number _____ Class _____ Expiration Date _____

Assignment of Payment

I authorize Tucson Electric Power (TEP) to issue, on my behalf, my full rebate to the following installer/dealer as payment toward the cost and/or installation of my PV system. I acknowledge that the payment made to the below named installer satisfies the financial obligation to me in connection with the Agreement signed by myself and TEP.

Company Name_____

Contact Person _____

Business Address _____

Customer Signature_____ Date _____

ACC APPROVED 4/10/08

Inspection Authorization

TEP, at its option, may perform periodic inspections of the system to ensure it is operating efficiently and safely. Presently TEP outsources all SunShare inspection services to a qualified third-party contractor. Do you authorize TEP to use a qualified third party contractor for your annual inspection?

Authorization Agreed ☒
Authorization Denied ☐

There are animals in the yard that the Program Inspector needs to be aware of: ✓ Yes _____ No (DOG)

WHEN COMPLETE PLEASE MAIL TO: SunShare/Renewables, PO Box 711, Mailstop DS501, Tucson, AZ 85702

OPTION #1

REVISION 0
ACC APPROVED 4/10/08

A UniSource Energy Company

SunShare Residential Solar Program
Grid-Tied
Up Front Incentive (UFI)
Renewable Energy Credit Purchase Agreement

This Grid-Tied Residential Solar Up Front Incentive (UFI) Agreement (the "Agreement") is hereby made and entered into this 24th day of FEBRUARY, 2010, by and between Tucson Electric Power Company, an Arizona corporation ("Company"), and VIKTOR PATEL BOLINKA, ("Customer"). Company and Customer may be referred to individually herein as a "Party" or collectively as the "Parties." Grid-Tied Residential Solar is hereby referred to as the "Program."

RECITALS

A. Company desires to increase the number of solar electricity generation facilities and the consumption of solar electricity within its service territory, while concurrently reducing the cost of solar electric generation systems for its customers. In support of these objectives and to further Company's continuing commitment to develop and encourage the use of renewable energy resources, Company has implemented the Program to provide financial incentives to its customers to install solar generating equipment; and

B. Company desires for Customer to participate in the Program and Customer desires to so participate under the terms and conditions contained in this Agreement, at the address of 4675 S. HARRISON RD, LOT 82, TUCSON, Arizona (the "Premises").

NOW, THEREFORE, in consideration of these premises and of the mutual promises herein contained, Company and Customer hereby agree as follows:

REVISION 0
ACC APPROVED 4/10/08

AGREEMENT

1. PROGRAM

Customer shall elect to participate in the Program by entering into this Agreement subject to the following conditions:

1.1 Renewable Energy System

1.1.1 System. Customer shall purchase a renewable energy generating system from any third party of Customer's choice ("Customer System"). To qualify under the Program, any such Customer System must comply with all renewable energy grid-tied residential solar technology specific requirements set forth in Attachment A "System Qualifications" and Attachment B "Off Angle & Shading Annual Derating Chart", which are attached hereto and incorporated herein.

1.1.2 Basis of Payment. The calculation of Customer environmental credits and Company payments hereunder shall be based on the system capacity or estimated energy kWh production rather than on measured system output. This represents a one time Up Front Incentive ("UFI") payment method.

2. SYSTEM INSTALLATION

To qualify for participation in the Program, all Customer Systems shall be installed by or on behalf of Customer in accordance with the requirements set forth in Attachment A and Attachment B, including, without limitation, a proper interconnection with Company's existing power grid. Customer shall be solely responsible for the installation of the Customer System, including all costs and expenses associated therewith.

3. SYSTEM INSPECTION

Following installation of Customer's System, Company shall inspect the Customer System for compliance with the applicable requirements set forth in Attachment A and Attachment B. If the Customer System or installation is found to be not in compliance for any reason, Company will notify Customer of the deficiencies causing the noncompliance. Company will have no further obligations under this Agreement until all such deficiencies are remedied by Customer to Company's reasonable satisfaction.

4. SYSTEM ELECTRICAL OUTPUT

Customer hereby assigns to Company all of its rights to all electrical output of the Customer System and all associated environmental credits, specifically including those created under the Arizona Corporation Commission's Renewable Energy Standard and Tariff Program (the "REST"), which may result from the installation and use of the Customer System. Company will thereafter return any and all value of such electric output to the Customer at no cost to

Customer. Company's right to Customer's power output and Renewable Energy Credits assigned hereunder shall continue until December 31st of the 20th full calendar year after completion of the installation of the Customer System in compliance with this Agreement (the "Assignment Period") and shall survive any termination of this Agreement.

5. RENEWABLE ENERGY CREDIT PURCHASE

Subject to the Customer System passing the Company inspection set forth in Section 3 above and to Customer's compliance with the remaining terms and conditions of this Agreement, Company shall pay Customer $3.00 per DC Watt of installed on-grid residential solar generating capacity of the Customer System for which completed Agreements are received and accepted by the Company and which system is operational within 180 days after application acceptance, as prorated by any de-rating for off-angle and shading that may apply by the percentages listed on the chart in Attachment B. The Customer System's DC Watts of installed on-grid residential solar generating capacity shall be determined by Company following Company's receipt of a copy of the City or County building permit associated with the installation of the Customer System, successful Customer System inspection and determination of the level of compliance with Attachment B. Any amounts determined to be owed under this Section shall be paid by Company to Customer within 30 days following the Company's completion of AC kWh testing hereunder.

6. RIGHTS TO CREDITS

Company shall have the right to the Renewable Energy Credits from the Customer System until the end of the Assignment Period. Customer shall not offer to sell or trade Renewable Energy Credits from the Customer System to any other party during this time. Customer shall not remove the Customer System or any components thereof from the Premises during the Assignment Period without express agreement of Company. If Customer removes the Customer System in violation of this Section 6, Customer shall immediately reimburse Company all UFI amounts paid by Company to Customer hereunder.

7. METER READING

Once per year, typically in late December, during the term of this Agreement, Company shall read the Customer System solar production meter. Thus, Company reserves the right to read, at its option, the Customer System meter. Customer shall provide Company with reasonable access to its Customer System to conduct any such readings.

8. WARRANTY

COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND HEREUNDER, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PERFORMANCE HEREUNDER WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, COMPANY MAKES NO REPRESENTATIONS

OR WARRANTIES WITH RESPECT TO THE CUSTOMER SYSTEM, ITS OPERATION, SAFETY, INSTALLATION, OR COMPLIANCE WITH ANY BUILDING OR SAFETY CODES, RULES OR REGULATIONS, AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, COMPANY HEREBY EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY ASSOCIATED THEREWITH.

9. LIMITATION OF LIABILITY

COMPANY'S ENTIRE LIABILITY ARISING OUT OF ITS PERFORMANCE UNDER THIS AGREEMENT SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES STEMMING FROM CLAIMS DIRECTLY ATTRIBUTABLE TO COMPANY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT. IN NO EVENT SHALL COMPANY, ITS EMPLOYEES OR AGENTS BE LIABLE TO CUSTOMER FOR LOSS OF PROFITS OR ANY OTHER SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGE, HOWEVER CAUSED, RESULTING FROM COMPANY'S PERFORMANCE HEREUNDER.

10. TERMINATION

If either Party shall at any time commit any material breach of any covenant or warranty under this Agreement and shall fail to cure the same within 30 days following written notice thereof, the non-breaching Party may terminate this Agreement, in whole or in part. This Agreement may also be terminated at any time by mutual written agreement of the Parties.

11. MISCELLANEOUS

11.1 Modification, Waiver and Severability. This Agreement may not be modified or supplemented except by written instrument signed by the Parties. No waiver of any default or breach hereof shall be deemed a waiver of any other default or breach thereof. If any part of this Agreement is declared void and/or unenforceable, such part shall be deemed severed from this Agreement which shall otherwise remain in full force and effect.

11.2 Assignment. This Agreement and the rights, duties, and obligations hereunder may not be assigned or delegated by any Party without the prior written consent of Company.

11.3 Governing Law and Venue. This Agreement shall be governed by the laws of the State of Arizona, without regard to the choice of law provisions thereof. Venue for any dispute arising hereunder shall be any court of competent jurisdiction located in Pima County, Arizona.

11.4 Entire Agreement. This Agreement is the final integration of the agreement between the Parties with respect to the matters covered by it and supersedes any prior understanding or agreements, oral or written, with respect thereto.

11.5 Counterparts. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same Agreement.

11.6 Titles and Captions. Titles or captions contained in this Agreement are inserted for convenience and for reference only and in no way define, limit, extend, or describe the scope of this Agreement or the intent of any provision hereof.

11.7 Expenses and Attorney's Fees. In the event of a breach or threatened breach of any term or provision of this Agreement, the non-breaching party shall be entitled to all of its remedies available at law or in equity, unless otherwise limited in this Agreement, and in addition shall be entitled to be reimbursed for all of its reasonable costs and expenses in enforcing this Agreement (if successful), including, but not limited to, reasonable attorney's fees. This section shall survive termination or expiration of this Agreement for any reason.

11.8 Force Majeure. Neither Party shall be liable to the other for failure to perform its obligations hereunder to the extent such failure results from causes beyond its reasonable control, including strikes, climatic conditions, acts of God, governmental laws, regulations, orders or requirements, interruptions of power or unavailability of equipment or supplies.

11.9 Customer Sale of Premises. In the event Customer sells the Premises where the Customer installed the Customer System, Customer's successor-in-interest shall expressly assume all of Customer's obligations hereunder in writing, and this Agreement shall not be affected, nor shall Company's rights hereunder be disturbed in any way, including, without limitation, Company's continued right to all Renewable Energy Credits assigned pursuant to Section 4 hereunder.

11.10 Notices. All notices under this Agreement shall be in writing and shall be given to the Parties thereto by personal service (including receipted confirmed facsimile), or by certified or registered mail, return receipt requested, or by recognized overnight courier service, to the Parties at the addresses set forth below. All notices shall be deemed given upon the actual receipt thereof.

Company: **Tucson Electric Power Company**
PO Box 711
Tucson, Arizona 85702
Fax: (520) 918-8350
Attn: Renewable Energy & Energy Efficiency Group

[signatures on following page]

REVISION 0
ACC APPROVED 4/10/08

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of February 22, 20 10.

TUCSON ELECTRIC POWER COMPANY

By:_____

Title:_____

CUSTOMER

By:_____

Print Name: Viktor Perez Poenka

Address: 4675 S. Wilmot Rd.
Lot # 82
Tucson, AZ 85730

Phone: 520-303-7308

BELOW TO BE FILLED IN BY UTILITY

Estimated Capacity Reserved: _____ **kW**

Estimated Funding Reserved: $ _____

Date Reserved: FEB 2 2 2010

REVISION 0
ACC APPROVED 4/10/08

Application Process
ATTACHMENT A
Grid-Tied Residential Solar System Qualifications

All grid-tied residential solar Customer Systems must meet the following system and installation requirements to qualify for Tucson Electric Power Company's ("TEP" or the "Company") Renewable Energy Credit Purchase Program. Capitalized terms not defined herein shall have the meanings ascribed to them in the Renewable Energy Credit Purchase Program Agreement.

1. All systems shall be installed with a horizontal tilt angle between 10 degrees and 60 degrees, and an azimuth angle of +/- 100 degrees of due south. Installation configurations for some systems receiving a UFI will not be eligible for the full RECPP incentive. The reduction will be determined by the TEP developed de-rating chart, Attachment B of this document, and as discussed further in this report under the section titled Conforming Project Incentives.

2. Qualifying systems using Building Integrated Photovoltaic (BIPV) modules of total array capacity of 5 kWDC or less shall receive 90% of the UFI incentive value for PV systems listed in Attachment A. Systems using BIPV module of total array capacity of greater than 5 kWDC shall only receive a PBI (see on-grid residential PBI Agreement).

3. Photovoltaic modules must be covered by a manufacturer's warranty of at least 20 years.

4. Inverters must be covered by a manufacturer's warranty of at least ten years to receive a UFI and at least five years to receive a PBI (see on-grid residential PBI Agreement).

5. The minimum PV array size shall be no less than 1,200 Wdc.

6. All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of UL Standard 1703.

7. All other electrical components must be UL listed.

8. The inverter must be certified as meeting the requirements of IEEE-1547 - Recommended Practice for Utility Interface of Photovoltaic Systems and it must be UL 1741 certified.

9. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code, including Article 690 and all grounding, conductor, raceway, overcurrent protection, disconnect and labeling requirements.

REVISION 0
ACC APPROVED 4/10/08

10. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electrical Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.

11. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment.

12. The Customer System installation must meet the TEP Service Requirements 2000 Edition, Page 1.20, as follows:

    "AN AC DISCONNECT MEANS SHALL BE PROVIDED ON ALL UNGROUNDED AC CONDUCTORS and SHALL CONSIST OF A LOCKABLE GANG OPERATED DISCONNECT CLEARLY INDICATING OPEN OR CLOSED. THE SWITCH SHALL BE VISUALLY INSPECTED TO DETERMINE THAT THE SWITCH IS OPEN. THE SWITCH SHALL BE CLEARLY LABELED STATING "DG SERVICE DISCONNECT."

13. For Residential Customer Systems, Company will provide a meter and meter socket that will be installed in a readily accessible outdoor location by the Customer between the Customer System and the connection to the overcurrent device in the Customer's electric service panel.

14. Energy storage devices are not allowed as part of the Customer System unless the energy storage charge controller is a separate component and Company can locate the meter at the Customer System's inverter output. Other types of qualified energy storage devices meet PBI requirements (see PBI Agreement).

15. Installation must have been made after January 1, 1997.

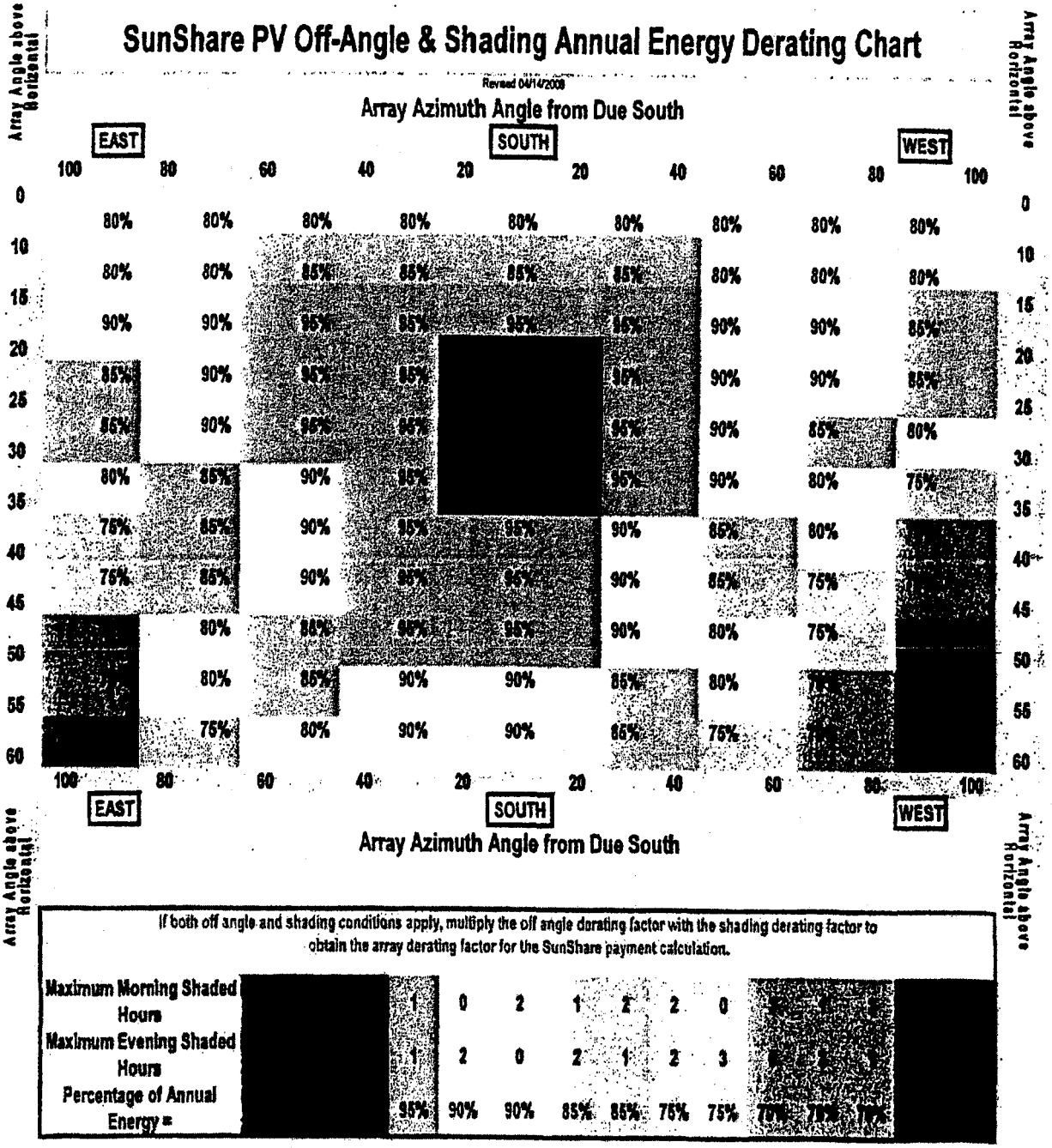
16. The Customer must be connected to the Company's electric grid.

17. All Customer System installations must be completed in a professional, workmanlike and safe manner.

REVISION 0
ACC APPROVED – 4/10/08

ATTACHMENT B

SunShare PV Off-Angle & Shading Annual Energy Derating Chart



2008 Agreement

EXHIBIT C

Tucson Electric Power Company
Off-Grid Residential Solar Electric
Application of Viktor Polivka

SunShare Residential Solar Program
Off-Grid Up Front Incentive (UFI)
Renewable Energy Credit
Purchase Agreement
Executed by Viktor Polivka

Attachment A
Off-Grid Residential
Solar System Qualifications

Attachment B
SunShare PV Off-Angle & Shading
Annual Energy Derating Chart

OPTION #2 Need Agreement Original

ACC APPROVED - 4/10/08

* Animal in yard *

TUCSON ELECTRIC POWER COMPANY
OFF-GRID
RESIDENTIAL SOLAR ELECTRIC APPLICATION

SunShare

Customer Information

Name (As it appears on utility bill(VIKTOR P POLIVKA

Mailing Address 4675 S. HARRISON RD LOT #82

City TUCSON , AZ Zip Code 85730

Street Address (if different from above) ______

Daytime Phone Number 520-303-7308

E-mail Address PPOLIVKA1@COX.NET Account Number [redacted]

Operating Agent (if different from Customer) ______

Solar - PV System Information

Module Supplier Name KYOCERA/ALTE Nameplate DC Rating 210 watts

Module Manufacturer KYOCERA Type KD210GX-LP Quantity of Modules 24

Module Warranty 20 years (Copy of warranty must be on file with Tucson Electric Power)

Inverter Make and Model Number XANTREX XW4024-120/240-60

Inverter Warranty 5 years (Copy of inverter warranty must be on file with Tucson Electric Power)

Total Cost 49,334.60 PV Cost 18,705.50 Labor Cost SELF INSTALL

Estimated Installation Date MARCH 1 2010

System Qualifications

The system must meet the requirements outlined in Attachment A and Attachment B of the Off-Grid Residential Solar Up Front Incentive or Performance Based Incentive Agreements.

ACC APPROVED - 4/10/08

Rebate Calculation

UFI Calculation for residential projects with a 20 year or longer module warranty and a 10 year or longer inverter warranty.

Nameplate DC Rating 210 Watts x Quantity of Panels 24 = System Size 5040

Rebate Calculation: _____ kW (System Size) x $2.00 = _____ (UFI)

Rebate Calculation for Self-Install: _____ kW (System Size) x $2.00 x 70% = _____

UFI – Residential BIPV 5 kW DC or less

Rebate Calculation: _____kW (System Size) x $2.00 x 90% = _____ (UFI)

TEP rebate cannot be more than 60% of system cost. Customer must pay at least 15% of system cost.

Customer Reservation Bid

Customer may elect to use maximum PBI payback listed in the Project Incentive Matrix or choose a smaller PBI amount that will be more competitive in the period ranking system.

Project Information

Has a City/County Permit been secured? _____ Yes ✓ No

Is this an application for Net Metering: ✓ Yes _____ No *(Net metering applies to systems 10 kW AC or less)*

Does this installation meet all ACC Interconnection/REST requirements? ✓ Yes _____ No

Installer Information

Installer/Company Name _____

Business Address _____

Arizona Registrar of Contractors (AZROC) License Information _____

AZROC License Number _____ Class _____ Expiration Date _____

Assignment of Payment

I authorize Tucson Electric Power (TEP) to issue, on my behalf, my full rebate to the following installer/dealer as payment toward the cost and/or installation of my PV system. I acknowledge that the payment made to the below named installer satisfies the financial obligation to me in connection with the Agreement signed by myself and TEP.

Company Name _____

Contact Person _____

Business Address _____

Customer Signature _____ Date _____

ACC APPROVED - 4/10/08

Inspection Authorization

TEP, at its option, may perform periodic inspections of the system to ensure it is operating efficiently and safely. Presently TEP outsources all SunShare inspection services to a qualified third-party contractor. Do you authorize TEP to use a qualified third party contractor for your annual inspection?

Authorization Agreed ☑
Authorization Denied ☐

There are animals in the yard that the Program Inspector needs to be aware of: ✓ Yes _____ No (DOG)

WHEN COMPLETE PLEASE MAIL TO: SunShare/Renewables, PO Box 711, Mailstop DS501, Tucson, AZ 85702

Option #2

REVISION 0
ACC APPROVED - 4/10/08

A UniSource Energy Company

SunShare Residential Solar Program
Off-Grid
Up Front Incentive (UFI)
Renewable Energy Credit Purchase Agreement

This Off-Grid Residential Solar Up Front Incentive (UFI) Agreement (the "Agreement") is hereby made and entered into this 24th day of February 20 10, by and between Tucson Electric Power Company, an Arizona corporation ("Company"), and Viktor Peter Polivka, ("Customer"). Company and Customer may be referred to individually herein as a "Party" or collectively as the "Parties." Off-Grid Residential Solar is hereby referred to as the "Program."

RECITALS

A. Company desires to increase the number of solar electricity generation facilities and the consumption of solar electricity within its service territory, while concurrently reducing the cost of solar electric generation systems for its customers. In support of these objectives and to further Company's continuing commitment to develop and encourage the use of renewable energy resources, Company has implemented the program to provide financial incentives to its customers to install solar generating equipment (the "Program"; and

B. Company desires for Customer to participate in the Program and Customer desires to so participate under the terms and conditions contained in this Agreement, at the address of 4625 S. Abrigon Rd, Lot 82, Tucson, Arizona (the "Premises").

NOW, THEREFORE, in consideration of these premises and of the mutual promises herein contained, Company and Customer hereby agree as follows:

REVISION 0
ACC APPROVED - 4/10/08

AGREEMENT

1. PROGRAM

Customer shall elect to participate in the Program by entering into this Agreement subject to the following conditions:

1.1 Renewable Energy System

1.1.1 System. Customer shall purchase a renewable energy generating system from any third party of Customer's choice ("Customer System"). To qualify under the Program, any such Customer System must comply with all renewable energy off-grid residential solar technology specific requirements set forth in Attachment A "System Qualifications" and Attachment B "Off Angle & Shading Annual Derating Chart", which are attached hereto and incorporated herein.

1.1.2 Basis of Payment. The calculation of Customer environmental credits and Company payments hereunder shall be based on the system capacity (Watts DC) rather than on measured system output. This represents a one time Up Front Incentive ("UFI") payment method.

2. SYSTEM INSTALLATION

To qualify for participation in the Program, all Customer Systems shall be installed by or on behalf of Customer in accordance with the requirements set forth in Attachment A and Attachment B, Customer shall be solely responsible for the installation of the Customer System, including all costs and expenses associated therewith.

3. SYSTEM INSPECTION

Following installation of Customer's System, Company shall inspect the Customer System for compliance with the applicable requirements set forth in Attachment A and Attachment B. If the Customer System or installation is found to be not in compliance for any reason, Company will notify Customer of the deficiencies causing the noncompliance. Company will have no further obligations under this Agreement until all such deficiencies are remedied by Customer to Company's reasonable satisfaction.

4. SYSTEM ELECTRICAL OUTPUT

Customer hereby assigns to Company all of its rights to all electrical output of the Customer System and all associated environmental credits, specifically including those created under the

Arizona Corporation Commission's Renewable Energy Standard and Tariff Program (the "REST"), which may result from the installation and use of the Customer System. Company will thereafter return any and all value of such electric output to the Customer at no cost to Customer. Company's right to Customer's power output and Renewable Energy Credits assigned hereunder shall continue until December 31st of the 20th full calendar year after completion of the installation of the Customer System in compliance with this Agreement (the "Assignment Period") and shall survive any termination of this Agreement.

5. RENEWABLE ENERGY CREDIT PURCHASE

Subject to the Customer System passing the Company inspection set forth in Section 3 above and to Customer's compliance with the remaining terms and conditions of this Agreement, Company shall pay Customer $2.00 per DC Watt of installed off-grid residential solar generating capacity of the Customer System for which completed Agreements are received and accepted by the Company and which system is operational within 180 days after application acceptance, as prorated by any de-rating for off-angle and shading that may apply by the percentages listed on the chart in Attachment B. The Customer System's DC Watt of installed off-grid residential solar generating capacity shall be determined by Company following Company's receipt of a copy of the City or County building permit associated with the installation of the Customer System, successful Customer System inspection and determination of the level of compliance with Attachment B. Any amounts determined to be owed under this Section shall be paid by Company to Customer within 30 days following the Company's completion of AC kWh testing hereunder.

6. RIGHTS FOR CREDITS

Company shall have the right to the Renewable Energy Credits from the Customer System until the end of the Assignment Period. Customer shall not offer to sell or trade Renewable Energy Credits from the Customer System to any other party during this time. Customer shall not remove the Customer System or any components thereof from the Premises during the Assignment Period without express agreement of Company. If Customer removes the Customer System in violation of this Section 6, Customer shall immediately reimburse Company all UFI amounts paid by Company to Customer hereunder.

7. WARRANTY

COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND HEREUNDER, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PERFORMANCE HEREUNDER. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, COMPANY MAKES NO REPRESENTATIONS

OR WARRANTIES WITH RESPECT TO THE CUSTOMER SYSTEM, ITS OPERATION, SAFETY, INSTALLATION, OR COMPLIANCE WITH ANY BUILDING OR SAFETY CODES, RULES OR REGULATIONS, AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, COMPANY HEREBY EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY ASSOCIATED THEREWITH.

8. LIMITATION OF LIABILITY

COMPANY'S ENTIRE LIABILITY ARISING OUT OF ITS PERFORMANCE UNDER THIS AGREEMENT SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES STEMMING FROM CLAIMS DIRECTLY ATTRIBUTABLE TO COMPANY'S GROSS NEGLIGENCE OR WILLFUL MISCONDUCT. IN NO EVENT SHALL COMPANY, ITS EMPLOYEES OR AGENTS BE LIABLE TO CUSTOMER FOR LOSS OF PROFITS OR ANY OTHER SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGE, HOWEVER CAUSED, RESULTING FROM COMPANY'S PERFORMANCE HEREUNDER.

9. TERMINATION

If either Party shall at any time commit any material breach of any covenant or warranty under this Agreement and shall fail to cure the same within 30 days following written notice thereof, the non-breaching Party may terminate this Agreement, in whole or in part. This Agreement may also be terminated at any time by mutual written agreement of the Parties.

10. MISCELLANEOUS

10.1. Modification, Waiver and Severability. This Agreement may not be modified or supplemented except by written instrument signed by the Parties. No waiver of any default or breach hereof shall be deemed a waiver of any other default or breach thereof. If any part of this Agreement is declared void and/or unenforceable, such part shall be deemed severed from this Agreement which shall otherwise remain in full force and effect.

10.2 Assignment. This Agreement and the rights, duties, and obligations hereunder may not be assigned or delegated by any Party without the prior written consent of Company.

10.3 Governing Law and Venue. This Agreement shall be governed by the laws of the State of Arizona, without regard to the choice of law provisions thereof. Venue for any dispute arising hereunder shall be any court of competent jurisdiction located in Pima County, Arizona.

10.4 Entire Agreement. This Agreement is the final integration of the agreement between the Parties with respect to the matters covered by it and supersedes any prior understanding or agreements, oral or written, with respect thereto.

10.5 Counterparts. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same Agreement.

10.6 Titles and Captions. Titles or captions contained in this Agreement are inserted for convenience and for reference only and in no way define, limit, extend, or describe the scope of this Agreement or the intent of any provision hereof.

10.7 Expenses and Attorney's Fees. In the event of a breach or threatened breach of any term or provision of this Agreement, the non-breaching party shall be entitled to all of its remedies available at law or in equity, unless otherwise limited in this Agreement, and in addition shall be entitled to be reimbursed for all of its reasonable costs and expenses in enforcing this Agreement (if successful), including, but not limited to, reasonable attorney's fees. This section shall survive termination or expiration of this Agreement for any reason.

10.8 Force Majeure. Neither Party shall be liable to the other for failure to perform its obligations hereunder to the extent such failure results from causes beyond its reasonable control, including strikes, climatic conditions, acts of God, governmental laws, regulations, orders or requirements, interruptions of power or unavailability of equipment or supplies.

10.9 Customer Sale of Premises. In the event Customer sells the Premises where the Customer installed the Customer System, Customer's successor-in-interest shall expressly assume all of Customer's obligations hereunder in writing, and this Agreement shall not be affected, nor shall Company's rights hereunder be disturbed in any way, including, without limitation, Company's continued right to all Renewable Energy Credits assigned pursuant to Section 4 hereunder.

10.10 Notices. All notices under this Agreement shall be in writing and shall be given to the Parties thereto by personal service (including receipted confirmed facsimile), or by certified or registered mail, return receipt requested, or by recognized overnight courier service, to the Parties at the addresses set forth below. All notices shall be deemed given upon the actual receipt thereof.

Company: **Tucson Electric Power Company**
PO Box 711
Tucson, Arizona 85702
Fax: (520) 918-8350
Attn: Renewable Energy & Energy Efficiency Group

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IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed as of February 22, 20 10 .

TUCSON ELECTRIC POWER COMPANY

By:______________________________

Title:______________________________

CUSTOMER

By:______________________________

Print Name: Viktor Peter Rowlo

Address:
4675 S. Harrison Rd
Lot -82
Tucson Arizona 85730

Phone: 520-308-7308

<u>TO BE FILLED OUT BY UTILITY</u>

Estimated Capacity Reserved: ________ kWh

Estimated Funding Reserved: $ ________

Date Reserved: FEB 22 2010

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Application Process
ATTACHMENT A
Off-Grid Residential Solar System Qualifications

All off-grid residential solar Customer Systems must meet the following system and installation requirements to qualify for Tucson Electric Power Company's ("TEP" or the "Company") Renewable Energy Credit Purchase Program. Capitalized terms not defined herein shall have the meanings ascribed to them in the Renewable Energy Credit Purchase Program Agreement.

1. All systems shall be installed with a horizontal tilt angle between 10 degrees and 60 degrees, and an azimuth angle of +/- 100 degrees of due south. Installation configurations for some systems receiving a UFI will not be eligible for the full RECPP incentive. The reduction will be determined by the TEP developed de-rating chart, Attachment B of this document, and as discussed further in this report under the section titled Conforming Project Incentives.

2. Qualifying systems using Building Integrated Photovoltaic (BIPV) modules of total array capacity of 5 kWDC or less shall receive 90% of the UFI incentive value for PV systems listed in Attachment A. Systems using BIPV module of total array capacity of greater than 5 kWDC shall only receive a PBI.

3. Photovoltaic modules must be covered by a manufacturer's warranty of at least 20 years.

4. Inverters must be covered by a manufacturer's warranty of at least ten years to receive a UFI and at least five years to receive a PBI.

5. The minimum PV array size shall be no less than 600 Wdc and the maximum PV array size shall not exceed 2,000 Wdc.

6. All photovoltaic modules must be certified by a nationally recognized testing laboratory as meeting the requirements of UL 1703.

7. Off-grid systems will not be metered. Compliance reporting production will be based on an annual 20% capacity factor using nameplate DC rating for capacity.

8. All other electrical components must be UL listed.

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9. The Customer System design and installation must meet all requirements of the latest edition of the National Electrical Code, including Article 690 and all grounding, conductor, raceway, overcurrent protection, disconnect and labeling requirements.

10. The Customer System and installation must meet the requirements of all federal, state and local building codes and have been successfully inspected by the building official having jurisdiction. Accordingly, the installation must be completed in accordance with the requirements of the latest edition of National Electrical Code in effect in the jurisdiction where the installation is being completed (NEC), including, without limitation, Sections 200-6, 210-6, 230-70, 240-3, 250-26, 250-50, 250-122, all of Article 690 pertaining to Solar Photovoltaic Systems, thereof, all as amended and superseded.

11. The Customer System must meet Company and Arizona Corporation Commission interconnection requirements for self-generation equipment.

12. The Customer System installation must meet the TEP Service Requirements 2000 Edition, Page 1.20, as follows:

    "AN AC DISCONNECT MEANS SHALL BE PROVIDED ON ALL UNGROUNDED AC CONDUCTORS and SHALL CONSIST OF A LOCKABLE GANG OPERATED DISCONNECT CLEARLY INDICATING OPEN OR CLOSED. THE SWITCH SHALL BE VISUALLY INSPECTED TO DETERMINE THAT THE SWITCH IS OPEN. THE SWITCH SHALL BE CLEARLY LABELED STATING "DG SERVICE DISCONNECT."

13. Installation must have been made after January 1, 1997.

14. All Customer System installations must be completed in a professional, workmanlike and safe manner.

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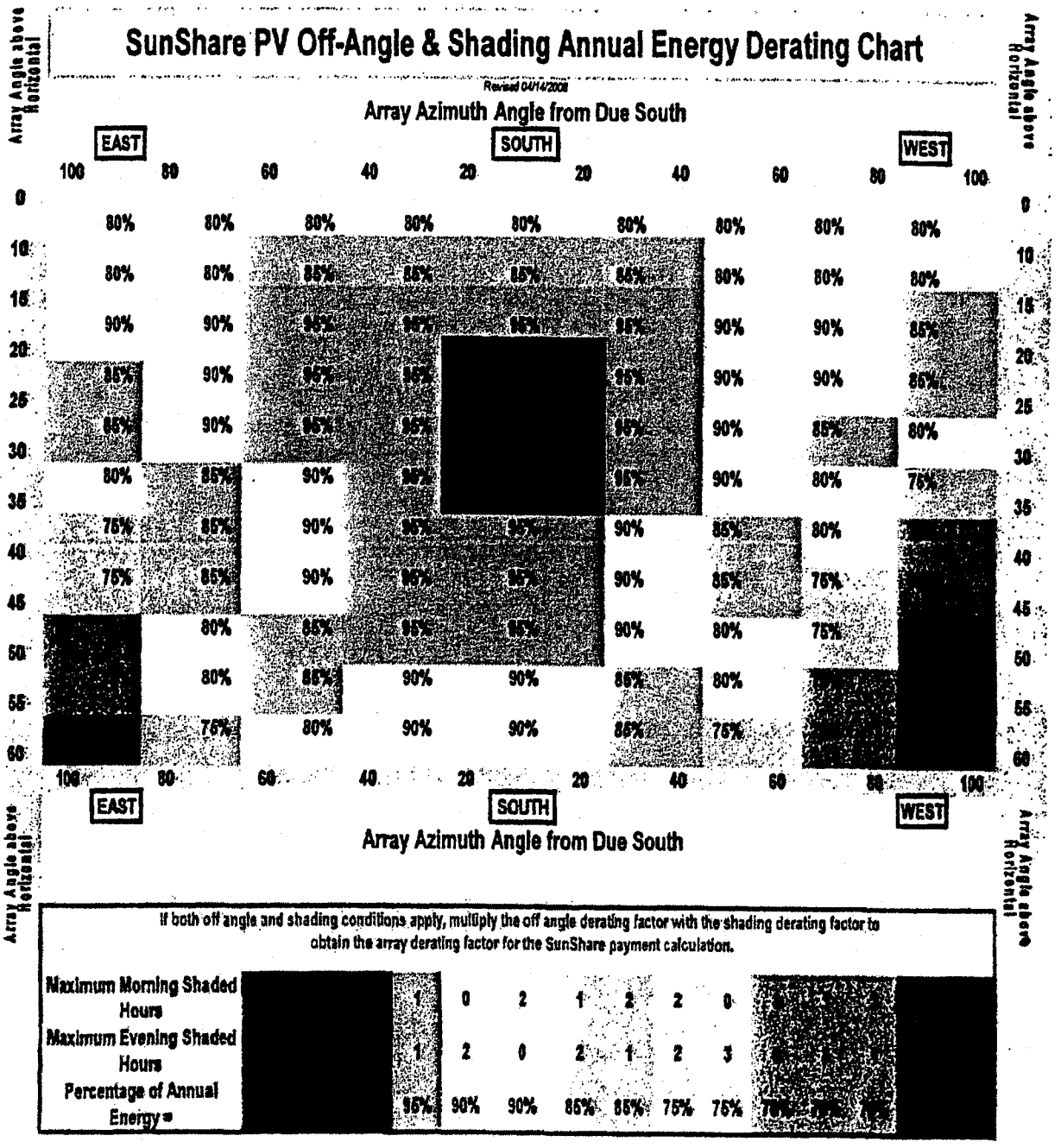
ATTACHMENT B



DECISION NO. 73088

EXHIBIT D

Tucson Electric Power Company Example Photovoltaic Generation with Battery Back-up One-Line Diagram*

***Although Exhibit D is labeled EXHIBIT 10, it was admitted at hearing as Hearing Exhibit TEP-8.**

EXHIBIT 10

DOCKET NO. E-01933A-10-0340.

DECISION NO. 73088

EXAMPLE PHOTOVOLTAIC GENERATION WITH BATTERY BACK-UP ONE-LINE DIAGRAM

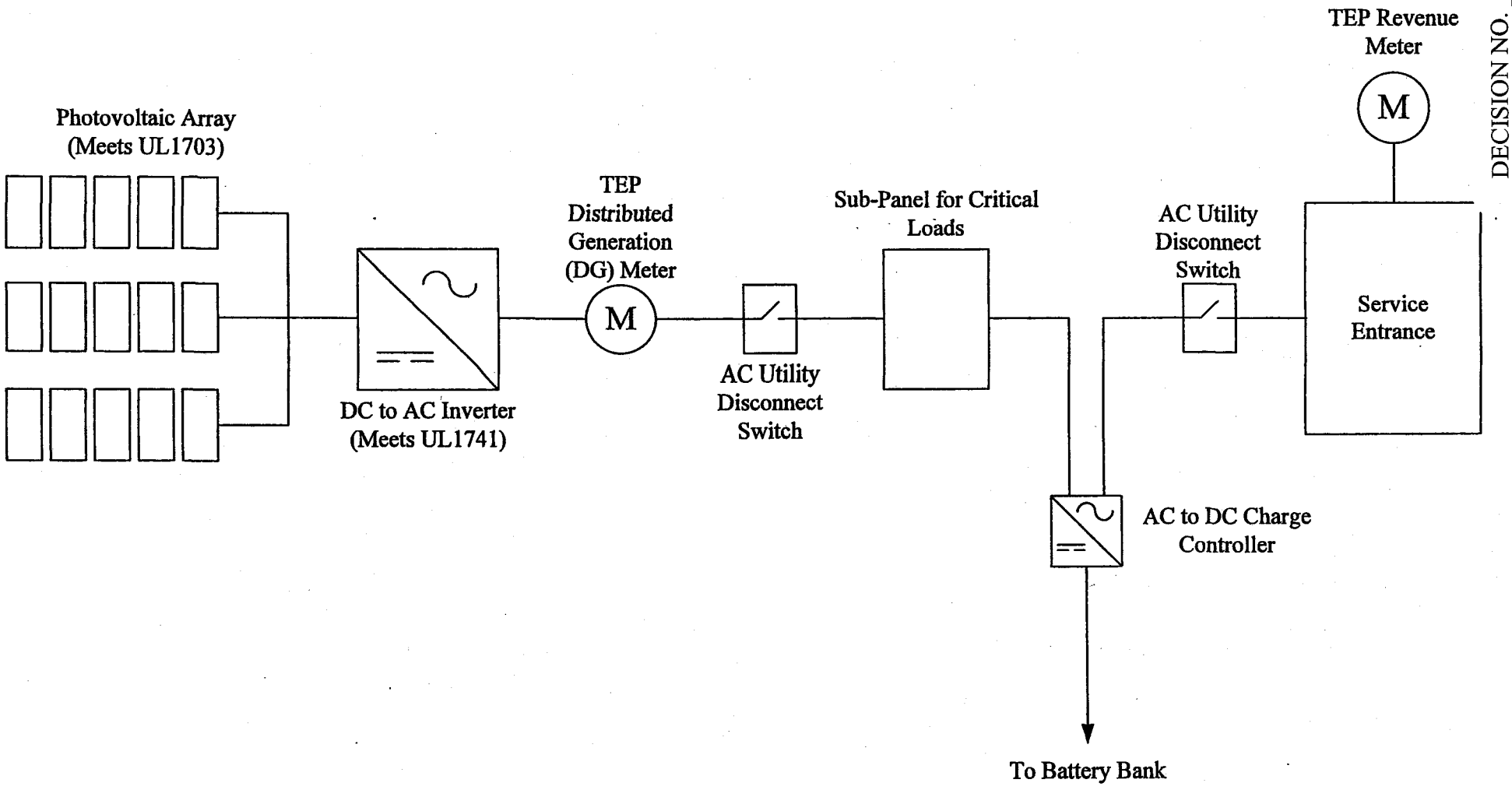


EXHIBIT E

City of Tucson
Development Services Department
Residential Photovoltaic Template
Electrical Element

Development Services Department

201 N. Stone Avenue
PO Box 27210
Tucson, Arizona 85726-7210
Tel. (520) 791-5550

RESIDENTIAL PHOTOVOLTAIC TEMPLATE
ELECTRICAL ELEMENT

APPLICABILITY

- Residential photovoltaic systems.
- Simple systems consisting of photovoltaic arrays, inverter, AC grid-tie.

FUNDAMENTAL REQUIREMENTS

- Minimum font size of 1/8-inch (all upper case). Reference 2006 International Building Code, 106.1.1.
- Standardized 11" X 17" sheets.
- Design per National Electrical Code and local amendments, with special emphasis on Article 690.
- Letter from utility company acknowledging grid-tie PV system, unless the project SunShare
- PV Panel Cut Sheets with clear identification of exact equipment selected, clear identification of all design-pertinent information (highlight rated power, rated voltage/voltage at maximum power, rated current/current at maximum power, open circuit voltage, short circuit current, series fuse rating, maximum system voltage), and documentation of listing of equipment
- Inverter Cut Sheets with clear identification of exact equipment selected, clear identification of all design-pertinent information (highlight nominal output power, input voltage range, maximum input voltage, maximum input current, nominal AC voltage, operating AC voltage range, maximum output current, overcurrent protection, ground fault protection, zero feedback documentation, positive/negative grounding requirements (if applicable), and documentation of listing of equipment
- Cut sheets for all manufactured devices